ANNUAL REPORT

OF THE

GRANT MEDICAL COLLEGE

BOMBAY

THIRD YEAR—SESSION 1848-49

133213

ROYAL ASIATIC SOCIETY LIBRARY OF THE BOMBAY BRANCH

BOMBAY:
AMERICAN MISSION PRESS
J. GRAHAM, PRINTER.

M.DCCC.XLIX.

h financial assistan
rnment of Maharas
ebpmentforMaharas

ANNUAL REPORT

OF THE

GRANT MEDICAL COLLEGE

BOMBAY.

THIRD YEAR.—SESSION 1848-49.

BOMBAY:
AMERICAN MISSION PRESS.
T. GRAHAM, PRINTER.

M.DCCC.XLIX.

Page.

(K). Questions on Anatomy 61
——— in Chemistry 65
——— in Physiology 65
——— in Practice of Physic 66
——— on Surgery 66
(L). Answers to the questions in Anatomy, Chemistry, Physiology, and Practice of Medicine 68
(M). Students of 1846-47. Tabular Statement exhibiting the classification of 3rd year Students, in accordance with the result of the Examinations held from the 22nd March to 5th April 1849 90
Students of 1847-48. Tabular Statement exhibiting the classification of 2nd year Students, in accordance with the result of the Examinations held from the 22nd to 30th March and 4th April 1849 91
Students of 1848-49. Tabular Statement exhibiting the classification of 1st year Students, in accordance with the result of the Examinations held from 22nd, 23rd, 28th, 29th, 30th March and 5th April 91
(N). Donations to the Museum 92
(O). Statement of the Accounts of the Anderson, Farish, and Carnac Scholarship Funds 95

ANNUAL REPORT

OF THE

GRANT MEDICAL COLLEGE

BOMBAY.

THIRD YEAR. SESSION 1848-49.

PROFESSORS.

C. MOREHEAD, M.D.,

Professor of the Institutes and Practice of Medicine.

JOHN PEET, Esq., Professor of Anatomy and Surgery.

H. GIRAUD, M.D., Professor of Chemistry and Materia Medica

---

1. At the examination held in April 1848, twelve Candidates presented themselves for admission into the College. Seven were found qualified, and of these, five have joined the Institution and two have withdrawn.

2. The number of Students attending during the Session has amounted to 22; of these 10 * were Hindus, 9 Parsees, and 3 Portuguese. Of the 22 Students, 4 were Free, and 18 Stipendiary.

* Of the following castes :—

3 Shenvis.	1 Vysha.
3 Pulsyas.	1 Purbhu.
1 Brahmin.	1 Khutri.

3. The course of instruction during the Session has been conducted strictly in accordance with the Prospectus published at the opening of the Session, and which forms Appendix (A.) of this Report.

4. Appendix (B.) is an abstract of the roll-calls held during the Session, and shews the character for regularity or irregularity of attendance of every Student of the College.

ANATOMY.

5. 108 Lectures and Demonstrations in Anatomy have been given, and the order, laid down in the Prospectus of the course appended to the last Report, has been followed.

6. The Professor of Anatomy reports, that the attention of the Students to the study of Practical Anatomy has been very satisfactory and has exceeded that of any former year; some of the Students having acquired a facility and neatness in making minute and difficult dissections, which is very creditable to them

7. The opportunities of studying Practical Anatomy have been ample, and Mr. Peet observes, "Each Student, with two or three exceptions, has in the course of the year studied practically, nearly the whole subject, keeping his attention however more particularly fixed upon those parts which, from want of time or other circumstances, he was unable to examine in the preceding Sessions. In this way during the last two Sessions scarcely a part of the body has escaped careful and minute examination by the Students."

Bhawoo Dajee, Mr. Carvalho, Mr. Lisboa, Merwanjee Sorabjee, and Burjorjee Dorabjee, are mentioned by Mr. Peet in terms of commendation. Atmaram Pandurung has, during this Session as well as the preced-

ing one, been of much assistance to the Professor of Anatomy by the steady and zealous manner in which he has prepared the illustrations required for the Anatomical demonstrations.

Chemistry.

8. This course has consisted of 72 Lectures delivered in accordance with the Syllabus appended to the last Report.

Dr. Giraud, however, has been careful to make such additions and alterations as the continually advancing state of Chemical Science must always render necessary. The subject of Voltaic Electricity, in particular, received more attention during this Session than heretofore.

9. The course of Practical Chemistry was conducted in the same manner as in the preceding Session. The system pursued was explained in the last Report of the College. The Professor of Chemistry reports favorably of the progress made by Shamrao Narayen, Narayan Dajee, Rustomjee Byramjee, and Palonjee Pestonjee.

10. Narayan Dajee officiated as Chemical Assistant during the Session and acquitted himself in a creditable manner and to the satisfaction of the Professor.

Institutes of Medicine.

11. This course, consisting of 72 Lectures, was delivered in accordance with the Syllabus submitted with the last Report.

12. The progress made by the senior Students in a knowledge of Physiology and the general doctrines of Pathology and Therapeutics has been, on the whole, satisfactory. To the junior Students many of the subjects were evidently of difficult comprehension.

Materia Medica and Botany.

13. The course of Materia Medica consisted of 72 Lectures. A detailed Syllabus of the order in which the different parts of the course have been arranged forms Appendix (C.) of this Report.

Practice of Medicine.

14. 71 Lectures were delivered on the Practice of Medicine. In Appendix (D.) will be found a general statement of the arrangement of the course, and of the subjects which have been taught. It is my intention at the close of next Session to prepare a more detailed Syllabus of this course.

Clinical Medicine.

15. Thirteen Students have attended the course of Clinical Medicine, and of these, seven have officiated in rotation as Clinical Clerks.—Bhawoo Dajee, Atmaram Pandurung, and Sebastian Carvalho, are deserving of much commendation for the assiduity and care with which they have discharged the duties of Clinical Clerks during the Session.

16. As this is the first Session in which Clinical Medicine has been taught in the College, it is expedient that I should explain the system of instruction which has been followed.

17. The Jamsetjee Jejeebhoy Hospital is adapted for the accommodation of 240 Males and 60 Females, and the number of sick annually treated has hitherto amounted to about 3,700 in-patients, and 5,100 Dispensary out-patients. One ward of this Hospital with accommodation for 20 sick, was set aside as a Clinical Medical Ward. The Professor of Medicine daily examined all the patients admitted into Hospital in the

course of each day, and selected those medical cases most appropriate for the instruction of the Students, and sent them to the Clinical Ward. This ward was visited daily at 7 o'clock A. M. and the Professor and the Students were engaged in it till 8 o'clock, and sometimes to a later hour. The cases of the patients were on admission taken by the Clinical Clerks, of whom there were always four on duty. The statement of the case was corrected by the Professor, then read to the Students by the Clinical Clerk, and the subsequent daily reports and prescriptions were dictated by the Professor at the bedside of the sick—and written down by the Clerks in the College and Hospital Diaries, and also by those other Students who were keeping cases on their own accounts. The opportunity was frequently taken, during the morning visit of pointing out and explaining to the class the symptoms of interest and the indications of cure in the diseases before them, and also of interrogating them on the course of treatment pursued, and of inviting them to offer suggestions in regard to it. The circumstance of the great proportion of the patients being ignorant of the English language, gives a facility in conducting Clinical instruction in this manner, at the beside of the sick, to an extent not generally available in Medical Schools. These clinical conversations and interrogations at the bedside of the sick will, I believe, prove more instructive to the Students than the formal Clinical Lectures delivered in the College. I have reason to hope that, as the Students increase in knowledge, and acquire a greater familiarity with their duties as Clinical Clerks, there will be more scope for this kind of instruction, and yet no necessity for decreasing the

number of patients under treatment at one time in the Clinical Ward.

18 In addition to instruction communicated as now explained, 33 Clinical Medical Lectures were delivered in the College, and in conducting these Lectures the following system was observed. All the cases discharged from the ward during the interval between the Lectures, were made the subject of comment. They were grouped according to the nature of the disease, and it was not unusual to preface the practical remarks suggested by the cases by a short recapitulation of the characteristic features of the disease, of which the cases were instances. Sometimes instead of a formal Lecture, the points of practical interest in the cases were brought forward through interrogation of the Students. This occasional substitution of examination for Lecture, in the Clinical Course, has the double advantage of keeping alive the attention of the Students, and of giving the Professor a better idea of the degree to which he has succeeded in carrying the Students along with him in their practical studies.

19. In Appendix (E.) will be found still further details regarding the course of Clinical Medicine These have been given with the view of shewing the nature and extent of the practical studies in which the Students have been engaged in Medicine during the past Session.

SURGERY.

20. The course of Surgery consisted of 66 Lectures. In Appendix (F.) will be found the Professor's Memorandum of the subjects taught during the Session, and of the arrangement observed

21. Mr. Peel in his Report states, "In addition to the instruction given in these Lectures, Operative Surgery, and Surgical Anatomy were, during the latter part of the Session, taught in the dissecting room, on every alternate Saturday. The greater number of the more important operations were performed on the dead subject—in the presence of the Students, and the Surgical relations of the parts concerned in each operation were at the same time demonstrated. It is anticipated, however, that this part of the Surgical Course will be more complete in all future Sessions.

Clinical Surgery.

22. The Professor of Surgery has submitted the following Report on the Course of Clinical Surgery.

"Clinical Surgery has been taught both in the College and Hospital. The plan followed in the College has been to select two or more of the most interesting cases admitted during the week, to read over to the Students assembled in the Lecture-room the notes of these cases, and afterwards both by question and explanation to endeavour to bring the chief points of interest prominently under their notice.

23. "In the Hospital one ward capable of accommodating 20 patients, has been set apart as the Clinical Surgical Ward. The patients received into this ward have, as a general rule, been selected by myself from the daily Hospital admissions. Four Students in rotation have been appointed Dressers for periods of three months, and a certain number of patients have been placed under the care of each Dresser. Notes of all the cases have, with a few exceptions, been taken by the Dressers on admission. At the Hospital visit the notes thus taken have been read over at the bedside of

the patients, and all necessary alterations and additions made. The case was then carefully copied by the Dresser, to whom the charge of the patient had been entrusted. In like manner, notes of the progress of each case have been dictated at the bedside of the patient during the visit. The greater number of the fractures after their first adjustment have, under my superintendence, been managed by the Dressers, and all the wounds and ulcers have been regularly dressed by them. Opportunities have been taken, so far as time would permit, of pointing out to the Students the more prominent changes observed in each case, and, by question and conversation, attempts have been made to render the impression as fixed as possible. On a careful review of the progress made during the Session, I feel little hesitation in expressing my belief that it has been quite equal to what might reasonably have been expected, when the number of other subjects which required a share of attention is kept in mind."

24. A table of the Diseases treated in the Clinical Surgical Ward forms Appendix (G.), and a list of Surgical operations performed in the presence of the Students, forms Appendix (H.) of this Report.

Examinations for Honors.

25. In the month of July 1848, the Notification which forms Appendix (I.) of the Report was published in the Government Gazette. It intimates the conditions on which the Carnac, Farish and Anderson Scholarships were to be awarded at the end of the Session. The prospectus which forms Appendix (J.) will explain the character of the examinations held for the award of these Scholarships and other Honors.

26. The written questions proposed in Anatomy,

Chemistry, Physiology and Materia Medica, Surgery and Practice of Medicine, will be found in Appendix (K.), and the answers of the most proficient Students in Anatomy, Chemistry, Physiology and Practice of Medicine, have been arranged in Appendix (L.). They were written apart from all books of reference, and are now published without correction or alteration of any kind.

27. The Scholarships notified for competition were awarded to the following Students. Those competed for by the *senior Students* who had completed the third year of their studies.

1st. The Carnac Scholarship of Rupees 20 monthly for the greatest proficiency in the Principles and Practice of Medicine and Surgery to ANUNTA CHUNDROBA.

2nd. The Anderson Scholarship of Rs. 20 monthly for the greatest proficiency in Anatomy and Physiology to BHAWOO DAJEE. But Bhawoo Dajee, now, as on two former occasions, generously declined the pecuniary advantages of the Scholarship. He however received an Honorary Certificate of its award, and a prize of Books (the Library of Medicine) suitably inscribed. And the Anderson Scholarship was re-awarded to J. C. LISBOA, the next proficient in Anatomy and Physiology.

3rd. The Carnac Scholarship of Rupees 20 monthly for the greatest proficiency in Materia Medica and Practical Pharmacy, to ANUNTA CHUNDROBA; but to him had been already awarded the Scholarship for the greatest proficiency in Medicine and Surgery, and, according to the terms of the competition, the successful competitor for more than one Scholarship shall, in addition to the award of one Scholarship, receive some honorary

mark of distinction, but the second Scholarship shall pass down to the proficient in the next degree. Accordingly to Anunta Chundroba a prize of books has been presented, inscribed in a manner that shall commemorate the honorable circumstances under which they have been received, and the Scholarship has been awarded to the next proficient in Materia Medica and Practical Pharmacy,—S. D. CARVALHO.

4th. The Farish Scholarship of Rupees 15 monthly for the second degree of proficiency in the principles and practice of Medicine and Surgery to S. D. CARVALHO. But to Mr. Carvalho, a Scholarship has been already adjudged. The Farish Scholarship has therefore been conferred on the proficient in the next degree, ATMARAM PANDURUNG.

The Scholarships competed for by the *junior Students*, those who have completed the first and second year of their studies, have been thus awarded.

1st. The Anderson Scholarship of Rs. 20 monthly for the greatest proficiency in Anatomy and Chemistry, to NARAYAN DAJEE.

2nd. The Farish Scholarship of Rupees 15 monthly for the greatest proficiency in Anatomy, was not awarded. Sudashiva Hemraj, the next in Anatomy to Narayan Dajee, did not come up to the minimum standard fixed on, and was moreover disqualified for the Scholarship from defective knowledge of Chemistry, Physiology, and Materia Medica.

3rd. The Anderson Scholarship of Rs. 15 monthly for the greatest proficiency in Chemistry both theoretical and Practical, to SHAMRAO NARAYAN.

The Farish Scholarship of Rs. 10 monthly open to competition of the first year's Students, only, for the

greatest proficiency in the subjects of their study during the Session, was awarded to RUSTOMJEE BYRAMJEE. To this promising young student was also awarded a prize of books sent by Sir Jamsetjee Jejeebhoy for presentation to some deserving Student of the College. It was awarded to Rustomjee Byramjee for regularity of attendance.

To PALONJEE PESTONJEE also a first year's Student, a prize of books, Christison's Dispensatory, was awarded by the Board of Education for regularity of attendance and industrious habits.

28. Of the senior Students who have unsuccessfully competed for these Scholarships, I have much pleasure in mentioning PAUL FRANCIS GOMEZ, MERWANJEE SORABJEE, and MUNCHERJEE SORABJEE, as very meritorious and promising Students.

29. The promotion of the following stipendiary Students has been recommended and sanctiond.

From the 2nd to the 3rd Class.

Burjorjee Dorabjee.	Nasserwanjee Bomanjee.
Muncherjee Sorabjee.	Dossabhoy Bazunjee.
Merwanjee Sorabjee.	Ardaseer Jamsetjee.

From the 1st to the 2nd Class.

Palonjee Pestonjee.	Withul Anunt.
Rustomjee Byramjee.	

30. Appendix (M.) is an abstract of the results of the examinations. It exhibits the Students classed in the order and degree of their proficiency in the several branches of their studies during the Session.

SIR JAMSETJEE JEJEEBHOY MEDICAL BOOK FUND AND MEDICAL PRIZE FUND.

31. The following letter, which was made known to

the Students of the College after the introductory Lecture, at the opening of the Session, has been already submitted to the Board of Education.

To the Superintendent of the Grant Medical College

"Sir,—For some time past, it has been with me a subject of consideration how I could best assist in bringing about those results aimed at by the Government in the establishment of the Grant Medical College. These results being, as I understand them, the formation of a class of educated and conscientious Medical Practitioners, from whose establishment in different parts of the country much comfort and good to the people generally may be looked for.

My first idea was to hold out inducement to young men to follow the Medical Profession by granting to them further pecuniary assistance during the period of their Studies in the College. But, on reflection I recollected that in other Countries in which a Scientific System of Medical Education existed, this Profession was selected by Members of those Classes of the Community, who are willing and able to pay largely for learning a Profession, which, when practised by industrious, persevering and conscientious individuals, is almost certain of proving ultimately a lucrative one; and the exercise of which, in alleviating pain and suffering, must I should think be very gratifying to those who follow it. At the same time I could not but be sensible that some years must probably elapse before experience of the advantages of Medical education will prove inducement sufficient to its being followed on the same terms in this country, as in those in which it has been long established. It is doubtless considerations such as these which render the already established

system of gratuitous instruction, assistance by stipends, and the endowment of Scholarships in the Medical College, measures very necessary to quicken the good results aimed at by the Government and desired by all who wish to ameliorate the condition of the people.

With every allowance for these views, it has seemed to me that direct pecuniary assistance may be carried too far, and with the effect of retarding the ultimate establishment in this country of a respectable and educated Medical Profession on its only true basis, viz. a sense of the advantages attending it.

Under these views, and believing that the direct pecuniary assistance already afforded has been carried to its useful limit, I have determined not to afford assistance to the Students in the way of grants of money, but to propose another mode of facilitating their Studies, and of marking my sense of their value and importance.

It is, as I have been informed, very essential that the Students should be well supplied with text-books during their Studies, and be induced to form a well selected Medical Library, to enable them to extend and continue their Studies, after they have ceased to be College Students and have become Medical Practitioners.

Medical books are originally expensive and the expenses attending their transmission to this country, add to the costs. It will therefore I believe prove of much benefit to the Students, if means can be devised for enabling them to supply themselves with books, not gratuitously but at prices very considerably reduced.

With this view I propose to pay into the Government Treasury the sum of Rupees ten thousand (Rs. 10,000), in expectation that Government with their

usual liberality will allow interest at 6 per cent. This sum to constitute a permanent fund, the interest of which (six hundred Rupees Rs. 600) I should wish to be disbursed at the discretion of the Superintendent of the College, subject to the control of the Board of Education, in assisting the deserving Students during their Studies, and, for the first few years after they have left the College, in providing themselves with Medical Books and Surgical Instruments.

Being apprehensive that the remarks which I have just made and the proposal to endow a fund for aiding in the purchase of books, may lead to the supposition that I am not fully sensible of the fact that the Medical Profession is not to be acquired from books alone, I am desirous of guarding against such a misapprehension, and at the same time of impressing upon the Students that the Profession, for which they are qualifying, is a practical one and not to be learnt from books alone.

I therefore also propose to pay into the Government Treasury, a further sum of Rs. 5000, (five thousand) in expectation that Government will allow 6 per cent interest. This sum to constitute a permanent fund, the interest of which (three hundred rupees Rs. 300 annually) is to be expended in the purchase of a suitable prize, or any other recompense or reward, to be awarded to the Student of the 4th or 5th year of his Studies, who evinces the greatest familiarity and knowledge of the practical details of Medicine and Surgery. I mean such knowledge as can only be acquired by assiduous observation of and assistance afforded to the Sick in the Hospital and Dispensary.

I shall feel obliged by your communicating this letter and the proposals which it contains to the Board of

Education for transmission to the Hon'ble the Governor in Council."

I have the honor to be,
Sir,
Your most obedient Servant,
JAMSETJEE JEJEEBHOY.

Bombay, 7th June, 1848.

32. The Hon'ble the Court of Directors have fully concurred in the anticipations entertained by Sir Jamsetjee Jejeebhoy, of the advantages likely to accrue from an endowment of the above nature, but have been unable to allow interest at a higher rate than 5 per cent.

33. Towards the close of the Session the following letter was received by me from VENAYEK GUNGADHUR SHASTREE, Esq., a native gentleman well known to the Board as an enlightened Student of Physical and Chemical Science.

7th April, 1849.

To

DR. C. MOREHEAD,
Supt. Grant Medical College.

"SIR,—As one who watches the spread of Science in this country with intense interest, I am anxious to present the following prizes to the Students of the Grant Medical College, in the hope that they may contribute in some degree to promote their zeal in the pursuit of their noble studies.

You will oblige me by adjudging the following prize of books to the Student, who evinces the greatest knowledge of Chemistry, Theoretical and Practical. I

should wish that, in determining this point, regard be particularly had to dexterity in manipulation and practical acquaintance with the subject as shewn by the late examinations, as well as by the appearance usually made during the past Session.

Brande's Manual of Chemistry, handsomely bound in calf and gilt.

Turner's Elements of Chemistry.

Faraday on Chemical Manipulation.

It is my intention also to present at the end of the next Session, the following prize to the Student, who, in addition to a good knowledge of Materia Medica as taught in the College, shews the greatest acquaintance with Indian Plants. May I suggest that the latter point be determined by a special examination in writing, during which the Students should be required to describe the Botanical characters, relations, &c. of the living specimens of such indigenous Plants as may be placed before them.

Pereira's Materia Medica, vols. 2.

Roxburgh's Flora Indica vols. 3.

I have the honor to be,
Sir,
Your most obedient Servant,
VENAYEK GUNGADHUR SHASTREE

34. The prize thus presented for the greatest knowledge of Theoretical and Practical Chemistry has been awarded to NARAYAN DAJEE.

REID SCHOLARSHIP.

35. On the occasion of the presentation of Scholarships and other prizes at the close of the Session, the

Meeting was addressed by CURSETJEE JAMSETJEE, Esq. to the following effect :—

"On behalf of the Reid Testimonial Committee, and as its Secretary, I take the present opportunity of intimating to the President of the Board of Education and to this Meeting that the Committee have communicated to Government the circumstance of a public subscription having been raised by the friends of the Hon'ble Mr. Reid, and of a resolution having been adopted to appropriate a portion of these subscriptions to the endowment of a Scholarship Fund, in connection with the Medical College.

"The interest which it is well known Mr. Reid ever displayed in the promotion of Native Education induced the desire on the part of the Subscribers to the Testimonial to have his name connected with this College, and it is anticipated that by this means the course of native improvement will in some degree be advanced.

"I need only say, further, how gratified I feel at being the channel of making this communication; and I gladly take occasion to state now publicly my belief (and I am sure many of my countrymen will concur with me) that the greatest benefits will result from the successful progress of this Institution. I would at the same time express my earnest hope that the Students of the College will appreciate the interest that is manifested in their welfare, and will continue to pursue their studies with zeal and industry, in the full assurance that they will have the support, countenance and liberal encouragement of their countrymen."

Library.

36. Since last Report, 238 volumes have been added to the Library. These include the 208 volumes adverted to in the 30th Para. of last Report, as having been recommended to the Board of Education for purchase

Anatomical Museum.

37. The preparations which have been added to the Museum during the past Session with the names of the Donors will be found in Appendix (N.). On reference to which it will be found that Bhawoo Dajee, Merwanjee Sorabjee, Burjorjee Dorabjee and Narayan Dajee have shewn a praiseworthy interest in the prosperity of the Institution to which they are indebted for their Medical Education. The donations presented to the Museum by these industrious Students are creditable to their ingenuity and manual dexterity.

38. The Statements of the accounts of the Carnac, Farish and Anderson Scholarships for the year 1848-49 constitute Appendix (O.) of the Report.

39. I have only in conclusion to observe that the building alluded to in the 40th Paragraph of my last Report, has been completed, and the comfort and convenience of the Students much increased by this additional instance of the liberal consideration of the Government.

C. Morehead,
Supt. G. M. College

APPENDICES.

APPENDICES

TO THE

ANNUAL REPORT OF THE GRANT MEDICAL COLLEGE.

THIRD YEAR. SESSION 1848-49.

APPENDIX (A).

GRANT MEDICAL COLLEGE.

SESSION 1848—49.

From the 15th June to the 1st November.

Lectures.

On Thursday the 15th June, an Introductory Lecture will be delivered by Mr. Peet at 12 o'clock.

ANATOMY.—*Mr. Peet*..... { Monday.... / Wednesday. / Friday..... } at 1 P. M.

will commence on Friday the 16th June.

CHEMISTRY.—*Dr. H. Giraud*.... { Tuesday.... / Thursday... } at 12 o'clock.

will commence on Tuesday the 20th June.

MATERIA MEDICA.—*Dr. H. Giraud*..... { Monday.... / Wednesday.. } at 12 o'clock.

will commence on Monday the 19th June.

INSTITUTES OF MEDICINE.—*Dr. C. Morehead*..... { Tuesday.... / Thursday .. } at 3 P. M.

will commence on Tuesday the 20th June.

SURGERY.—*Mr. Peet* ..... { Tuesday.... / Saturday. .. } at 1 P. M

will commence on Tuesday the 20th June.

PRACTICE OF MEDICINE.—*Dr. C. Morehead* ..... { Monday.... / Friday ..... } at 3 P. M

will commence on Friday the 16th June.

CLINICAL SURGERY.—*Mr. Peel.* Thursday .. at 2 P M
will commence on Thursday the 6th July.

CLINICAL MEDICINE. — *Dr C. Morehead* ..... } Wednesday . } at 3 P. M
will commence on Wednesday the 5th July

PRACTICAL CHEMISTRY.—*Dr. H. Giraud* ..... } Friday .... } at 11 A. M.
will commence on Friday the 23rd June.

Examinations.

Anatomy	Thursday	1 P. M.
Chemistry	Saturday	11 A. M.
Materia Medica	Saturday	12 o'clock.
Institutes of Medicine	Saturday	3 P. M.

From the 1st November to the 15th of March—the following alterations in the hours of Lectures and Examinations will take place

Lectures.

ANATOMY	Monday .... Wednesday.. Friday.	at 12 o'clock.
CHEMISTRY	Tuesday. .. Thursday ..	12 o'clock.
MATERIA MEDICA	Monday .... Wednesday..	10 A. M.
INSTITUTES OF MEDICINE.....	Tuesday ... Thursday...	1 P. M.
SURGERY	Tuesday ... Thursday ..	10 A. M
PRACTICE OF MEDICINE	Monday.... Friday	1 P. M.
CLINICAL SURGERY	Saturday	12 o'clock.
CLINICAL MEDICINE	Wednesday ..	1 P. M.
PRACTICAL CHEMISTRY	Friday	11 A M

Examinations.

Anatomy.....	Friday.....	10 A. M
Chemistry.....	Saturday.....	11 A. M.
Materia Medica.	Saturday.....	10 A. M.
Institutes of Medicine.....	Saturday	1 P. M.

Practical Anatomy. The dissecting season will commence on the 1st November and terminate on the 15th March, and the Students will be occupied with practical Anatomy daily during this period, between the hours of 2 P. M. and 5 P. M.

Clinical Medicine. The Clinical Medical Ward in the Hospital will be visited daily at 7 A. M. commencing on the 1st July.

Clinical Surgery. The Clinical Surgical Ward in the Hospital will be visited daily at 11 A. M. commencing on the 1st July.

The 1st and 2nd year Students—will attend the Hospital daily at 7 A. M. in rotation for periods of two months, and will be engaged in compounding and dispensing Medicines, and acquiring a practical knowledge of the application of bandages and surgical dressing.

Roll Calls. A general Roll-call of the Students will take place in the College daily, at 10 A. M. and 4 P. M.

A Roll-call will also take place before the commencement of each Lecture and Examination, as well as in the Clinical Wards.

Course of Study for the 1st year Students.

MONDAYS.....	Anatomical Lecture.
TUESDAYS	Chemical Lecture.
WEDNESDAYS ...	Anatomical Lecture. Written Exercise in Chemistry.
THURSDAYS	Chemical Lecture. Examination in Anatomy.
FRIDAYS.....	Anatomical Lecture. Practical Chemistry.
SATURDAYS.	Examination in Chemistry. Written Exercise in Anatomy.

During the hours when not engaged in the Lecture room, the Students will be occupied in reading and note-taking in the Library.

Course of Study for 2nd year Students.

MONDAYS	Anatomical Lecture. Lecture on Materia Medica.
TUESDAYS	Lecture on Chemistry. Lecture on Institutes of Medicine.
WEDNESDAYS....	Lecture on Anatomy. Lecture on Materia Medica.

THURSDAYS	Lecture on Chemistry. Lecture on the Institutes of Medicine. Anatomical Examination
FRIDAYS.....	Lecture on Anatomy. Practical Chemistry.
SATURDAYS	Examination in Chemistry. Examination in Materia Medica. Examination in the Institutes of Medicine.

Practical Anatomy daily, from 1st November to 15th March.

On the 1st Friday of every month, written questions in Anatomy; on the 2nd Friday, questions in Chemistry; on the 3rd Friday, questions in the Institutes of Medicine; on the 4th Friday, questions in Materia Medica,—will be proposed. The answers to be written by the Students when most convenient to themselves, and to be delivered to the respective Professors at the Lecture hours on the succeeding Tuesday.

Course of Study for 3rd year Students.

MONDAYS	Lecture on Anatomy. Lecture on Materia Medica. Lecture on Practice of Medicine.
TUESDAYS	Lecture on the Institutes of Medicine. Lecture on Surgery.
WEDNESDAYS	Lecture on Anatomy. Lecture on Materia Medica. Lecture on Clinical Medicine.
THURSDAYS.	Lecture on the Institutes of Medicine. Lecture on Clinical Surgery. Anatomical Examination.
FRIDAYS	Lecture on Anatomy. Lecture on Practice of Medicine.
SATURDAYS.....	Lecture on Surgery. Examination in Materia Medica. Examination in the Institutes of Medicine.

Clinical Wards.—To be attended daily. Practical Anatomy daily, from 1st November to 15th March.

C. MOREHEAD,
Supt. G. M. College.

Monday, *June 10th*, 1848.

APPENDIX (B).

Abstract of Roll-calls for the Session 1848-49.

No.	Names	Absent.	Leave.	Sick.	Total.	
1	Bhawoo Dajee	3	37	29	69	
2	Atmaram Pandurung	7	9	16	32	
3	Paul Francis Gomes	7	57	6	70	
4	Furdunjee Jamsetjee	4	51	22	77	
5	Ananta Chundroba	4	11	121	136	
6	Sebastian A. D. Carvalho	1	13	171	185	
7	J. C. Lisboa	2	41	135	178	
8	Burjorjee Dorabjee	1	11	144	156	
9	Dossabhoy Bazunjee	1	4	53	58	
10	Muncherjee Sorabjee	30	5	41	76	26 "absent" were *late* at Morning Hospital Roll-calls
11	Merwanjee Sorabjee	2	1	182	185	
12	Ardaseer Jamsetjee	3	10	78	91	
13	Naserwanjee Bomanjee	..	14	44	58	
14	Narayan Dajee	..	18	..	18	
15	Shamrao Narayan	1	21	98	120	
16	Sudashew Hemraj	5	27	40	72	
17	Balcrushna Chintoba	1	34	12	47	
18	Balcrushna Sukharam	8	50	9	67	
19	Huricluud Chundroba	22	46	86	164	
20	Wittul Anunt	4	10	68	82	
21	Palunjee Pestonjee	2	..	21	23	
22	Rustomjee Byramjee	1	1	1	3	

Number of Roll-calls during the Session 1,555.

C. Morehead,
Supt. G. M. College

APPENDIX (C)

SYLLABUS OF LECTURES

ON

MATERIA MEDICA.

BY

HERBERT GIRAUD, M.D., EDIN

In this course of Lectures the subject of Materia Medica is treated of in conformity with the Natural History-arrangement of Medicinal substances. In the first place, the Elementary Bodies, and their Mineral Compounds, classified after the Electro-chemical Hypothesis, are brought under notice. Next, as an introduction to the study of the Vegetable Materia Medica, Lectures are delivered on Structural, Physiological, and Systematic Botany.

The articles of the Vegetable Materia Medica are then treated of after an arrangement founded on the Natural System of Decandolle, —each natural order being Botanically described:—its Geographical distribution pointed out:—and references made to the important plants included in it, which are either indigenous to, or cultivated in India.

The course concludes with an account of the Animal Materia Medica.

I.

Lecture I.

Introduction to the study of Materia Medica

Lecture II.

Pharmaceutic Chemistry and the Operations of Pharmacy.

Lecture III.

The nature and mode of preparation of the various Pharmaceutic Preparations.

Lecture IV.

The Methods of Prescribing Medicines.

Lecture V.

Explanation of the terms employed to denote the several Physiological and Therapeutic actions of Medicines.

II.

MINERAL MATERIA MEDICA.

The Inorganic Medicinal Substances are described in the following manner: 1st. Their natural conditions. 2nd. Their mode of preparation for use. 3rd. Their Physical and Chemical Properties. 4th. Their Physiological and Therapeutic actions. 5th. Their mode of administration and their doses. 7th. Their Officinal Preparations.

Lecture VI.

OXYGEN AND HYDROGEN.

WATER. Distilled. Rain. Spring. River. Well. Lake. Marsh. Sea Water.

MINERAL WATERS. *Class I.* Chalybeate or Ferruginous Waters.

Ord. 1. Carbonated Chalybeates. *Ord.* 2. Sulphated Chalybeates.

Class II. Sulphureous or Hepatic Waters.

Class III. Acidulous or Carbonated Waters.

Class IV. Saline Waters.

Ord. 1. Purging Saline Waters. *Ord.* 2. Brine Waters. *Ord.* 3. Calcareous Waters. *Ord.* 4. Alkaline Waters. *Ord.* 5. Siliceous Waters.

Lecture VII.

BATHS.

1. Hot Air Bath. 2. Vapour Bath. 3. Cold Bath. 4. Tepid Bath 5. Warm Bath. 6. Hot Bath. 7. Shower Bath 8. The Douche. 9. Medicated Baths.

Lecture VIII.

SULPHUR.

Unguentum Sulphuris. Unguentum Sulphuris Comp.

SULPHUR AND OXYGEN.

Acidum Sulphuricum. *Acidum Sulphuricum Dilutum.*

Lecture IX.

Phosphorus and Oxygen.

Acidum Phosphoricum Dilutum.

Nitrogen and Oxygen.

Acidum Nitricum. *Acidum Nitricum Dilutum.*

Lecture X.

Iodine.

Tinctura Iodinii Comp. *Unguentum Iodinii Comp.*

Bromine.

Lecture XI.

Chlorine.

Chlorine and Hydrogen.

Acidum Hydrochloricum. *Acidum Hydrochloric : Dilutum.* *Acidum Nitro-Hydrochloricum.*

Lecture XII.

Carbon.

Carbo Ligni. Carbo Animalis. *Carbo Animalis Purif.*

Hydrogen and Carbon.

Petroleum. Creasotum *(contains also Oxygen).*
Unguentum Creasoti Succinum. *Oleum Succini.*

Lecture XIII.

Hydrogen and Nitrogen.

Ammonia. *Liquor Ammoniæ Fortior.* *Liquor Ammoniæ.* *Tinctura Ammoniæ Comp.* *Linimentum Ammoniæ.*
Ammoniæ Carbonas. *Spiritus Ammoniæ.* *Spiritus Ammoniæ Fœtidus.* *Spiritus Ammoniæ Aromaticus.*
Ammoniæ Sesquicarbonas. *Liquor Ammoniæ Sesquicarb.* *Liniment. Ammoniæ Sesquicarb.*
Ammoniæ Hydrochloras.
Ammoniæ Acetas. *Liquor Ammoniæ Acetatis.*

Lecture XIV.

Carbon, Oxygen, Hydrogen.

Alcohol.

Spiritus Rectificatus. Spiritus Tenuior.

Ardent Spirits. *Brandy. Rum. Gin. Whiskey. Arrack.* Wines. *Port. Sherry. Madeira. Claret. Champaigne.* Beer. Ale. Porter.

Lecture XV.

ETHER.

Ether Sulphuricus. *Spiritus Etheris: Salphurici Comp.* Oleum Ethereum. *Spiritus Etheris Nitrici.*

ACETIC ACID.

Acidum Aceticum. Acetum Distillatum.

Lecture XVI.

CARBON. NITROGEN. HYDROGEN.

HYDROCYANIC ACID.

Acidum Hydrocyanicum Dilutum.

Lecture XVII.

POTASSIUM.

Potassæ Hydras. *Potassa cum Calce. Liquor Potassæ.*

Potassii Iodidum. *Liquor Potassii Iodidi Comp.*

Potassii Bromidium. Potassæ Carbonas Impura.

Potassæ Carbonas. *Liquor Potassæ Carbonatis.*

Potassæ Bicarbonas. *Liquor Potassæ Effervescens.*

Potassii Sulphuretum. Potassæ Sulphas. Potassæ Bisulphas. Potassæ Nitras. Potassæ Chloras.

Potassæ Tartras. Potassæ Bitartras. Potassæ Acetas.

Lecture XVIII.

SODIUM.

Sodæ Hydras. Sodæ Carbonas Impura. Sodæ Carbonas.

Sodæ Sesquicarbonas. *Liquor Sodæ Effervescens.*

Sodii Chloridum. *Liquor Sodæ Chlorinatæ.*

Sodæ Biboras. Sodæ Sulphas. Sodæ Phosphas.

Sodæ Potassio-Tartras. Sodæ Acetas.

Lecture XIX.

BARIUM.

Baryta. Barytæ Carbonas. Barii Chloridum. *Liquor Barii Chloridi.*

CALCIUM.

Calx. Calcis Hydras. *Liquor Calcis* Calcis Carbonas. Calcis Carbonas Dura (marmor). Calcis Carbonas Friabilis (Creta)

Creta Preparata. Mistura Cretæ. Pulvis Cretæ Compositus. Pulv. Cretæ Comp. c Opio. Confectio Aromatica. Calx Chlorinata Calcii Chloridum. *Liquor Calcii Chloridi.*

Lecture XX

MAGNESIUM.

Magnesia. Magnesiæ Carbonas. Magnesiæ Sulphas.

ALUMINUM.

Alumen. (Sulphas Aluminæ et Potassæ). Alumen Exsiccatum. *Liquor Aluminis Comp.*

Lecture XXI

IRON.

Ferri Ramenta. Ferri Sesquioxidum. Ferri Iodidum. *Syrupus Ferri Iodidi. Tinctura Ferri Sesquichloridi.* Ferri Ammonio–Chloridum. *Tinct. Ferri Ammon-Chloridi.* Ferri Sulphas. *Ferri. Carbonas Saccharatum. Pilulæ Ferri Compositæ. Misturâ Ferri. Comp.* Ferri Acetas. Ferri Percyanidum. Ferri Potassio Tartras.

Lecture XXII.

ZINC.

Zinci Oxydum. *Unguentum Zinci.* Zinci Chloridum. Calamina Calamina Preparata. *Ceratum Calaminæ.* Zinci Sulphas.

COPPER.

Cupri Sulphas. Cupri Ammonio–Sulphas. *Liquor Cupri Ammonio–Sulph.* Œrugo (Diacetas Cupri Impura) Linimentum Œruginis.

Lecture XXIII.

LEAD.

Plumbi Oxydum (Semivitreum.) *Emplastum Plumbi. Emplastum Resinæ. Unguentum Plumbi Comp.* Plumbi Oxydum Hydratum. Plumbi Chloridum. Plumbi Iodidum. *Unguentum Plumbi Iodidi* Plumbi Carbonas. Plumbi Acetas. *Ceratum Plumbi Acetatis. Liquor Plumbi Diacetatis. Liquor Plumbi Diacetatis Dilutus. Ceratum Plumbi Compositum.*

BISMUTH

Bismuthi Trisnitras

TIN.

Pulvis Stanni

Lecture XXIV.

ANTIMONY.

Antimonii Oxydum. *Pulvis Antimonii Comp. Pulvis Jacobi* Antimonii Sesquisulphuretum. Antimonii Oxysulphuretum. Antimonii Potassio-Tartras. *Vinum Antimonii Potassio-Tartratis. Unguentum Antimonii Potassio-Tart.*

ARSENIC.

Acidum Arseniosum. *Liquor Potassæ Arsenitis*

Lecture XXV.

MERCURY.

Hydrargyrum. *Hydrargyrum cum Creta Pilulæ Hodrargyri. Unguentum Hydrargyri Fortius. Unguentum Hydrargyri Mitius. Ceratum Hydrar. Comp. Linimentum Hydrargyri Comp. Emplastium Hydrargyri. Emplastrum Ammoniaci cum Hydrargyro.* Hydrargyri Oxydum. *Lotio Nigra.*

Lecture XXVI.

Hydrargyri Binoxydum. Hydrargyri Nitrico Oxydum. *Unguentum Hydrar. Nitrico-Oxydi.* Hydrargyri Iodidum. *Pilulæ Hydrargyri Iodidi. Unguentum Hydrargyri Iodidi.* Hydrargyri Biniodidum. *Unguent. Hydrar. Biniodidi.* Hydrargyri Chloridum (Calomel). *Pilulæ Hydrargyri Chloridi Comp.*

Lecture XXVII.

Hydrargyri Bichloridum (Corrosive Sublimate). *Liquor Hydrargyri Bichloridi.* Hydrargyri Ammonio-Chloridum. *Unguentum Hydrargyri Ammonio-Chloridi.* Hydrargyri Bisulphuretum. Hydrargyri Sulphuretum cum Sulphure. *Unguentum Hydrargyri Nitratis.* Hydrargyri Bicyanidum.

SILVER.

Argenti Nitras. *Liquor Argenti Nitratis.* Argenti Cyanidum

III.

BOTANY.

Lecture XXVIII

Introduction to the study of Botany.

Lecture XXIX.

THE ELEMENTARY VEGETABLE TISSUES. Vegetable Cell Development. Cellular Tissue. *Parenchyma. Prosenchyma. Inu-*

chyma. Bothrenchyma. (Spiral Vessels and Ducts). Cinenchyma. Contents of the Tissues. *Schlerogen. Amyloid. Fecula. Chlorophyle. Chromule. Raphides. Gum. Sugar. Dextrine. Resin, &c. &c.*

Lecture XXX

The Epidermis. Cuticle. Stomata. Hairs. Strings. Prickles.

COMPOUND ORGANS.

EMBRYO.
- Axile System, or Axis.. { Ascending.. Plumule. / Descending. Radicle.
- Horizontal, Centrifugal, or Medullary System.. ..... Cotyledous.

Stem.
Collar
Root..... { Caudex. / Spongioles.

Forms of Roots. *Nodose. Conical or Tap Root. Moniliform. Testiculate. Coraline. Tuberous. Fasciculate.*

Lecture XXXI.

Stems. *Exogenous. Endogenous. Acrogenous. Thallogens.* Structure of Exogenous Stems and their mode of growth. *Pith or Medulla. Medullary Sheath. Medullary Rays.*

Wood. { *Duramen or Heart Wood.* / *Alburnum.*

CAMBIUM.

Bark { *Endoplæum or Liber.* / *Epiplæum.* / *Mesoplæum.* / *Epidermis.*

Forms of undergound Stems. *Tuber. Rhizoma. Cormus. Creeping Stem.*

Lecture XXXII.

Formation of Leaf Buds. Laws of their developement.

Bulbs. Bulblets.

Nodes. Internodes.

Vernation. *Convolute. Involute. Plicate. Revolute. Equitant.* Structure and mode of growth of Leaves.

Stipule. Petiole. Lamina. Midrib.

Leaves of Exogens. Leaves of Endogens.

Arrangement of Leaves on Stems. *Alternate. Opposite. Verticillate.*

Forms of Leaves.

Simple Leaves. *Orbicular. Ovate. Lanceolate. Oblong. Peltate. Reniform. Oblique. Sagittate. Hastate. Cuneate. Triangular. Palmate.*

Compound Leaves. *Ternate. Digitate. Pedate. Pinnate. Bipinnate. Tripinnate. Bijugate.*

Lecture XXXIII.

Motions of the Fluids of Plants.
The Respiratory and Assimilative Functions of Plants.

Lecture XXXIV.

The effects of Physical Agents on the Growth of Plants. *Manures. Alternation of Crops.*

Lecture XXXV.

Formation of Flower Buds.

Bracts or Bracteæ. *Bractlets or Bracteolæ.*
Spatha. *Involucrum.*
Peduncle. Pedicel. Rachis.

Forms of Inflorescence. *Terminal and Solitary. Axillary and Solitary. Raceme. Spike. Spadix. Amentum. Capitulum. Umbel. Corymb. Panicle. Thyrsus. Cyme.*

Œstivation or Præfloration. *Valvate. Imbricate. Alternate Convolute. Induplicate. Plicative. Vexillary.*

Flowers may be *Dimerous. Trimerous. Tetramerous. Pentamerous.*

Floral Envelopes.

Calyx; Sepals. *Polysepalous, or Polyphyllous. Monosepalous, or Gamosepalous, or Monophyllous.*

The Calyx may be *Superior. Inferior. Galeate. Ringent. Calyptrate. Calcarate. Double.*

Corolla; Petals. *Polypetalous. Monopetalous.*

The Corolla may be *Labiate. Calceolate. Ringent. Papilionaceous. Campanulate. Funnel-shaped.*

Lecture XXXVI.

Perianth or Perigone. *Naked or Achlamydeous.*

Limb. Tube. Unguis.

An Irregular Flower. An Unsymmetrical Flower. Stamens. Stamina. Andrœceum.

Filament. Anther

Arrangements of Stamens. *Hypogynous. Perigynous. Epigynous. Didynamous. Tetradynamous. Monadelphous. Diadelphous. Polyadelphous. Gynandrous.*

The Anther. *Its Lobes. Connective. Valves. Syngenesious Anthers.*

Pollen Grains. Pollen Tubes. Fovilla.

THE DISK

Pistil or Gynœceum ..... { Stigma. Style. Ovary or Ovarium.

Gynophore. Carpels. *Apocarpous. Syncarpous*

Placenta. *Marginal. Central. Parietal.*

Lecture XXXVII.

The Ovule. Podosperm. Nucleus. Primine. Secondine.

Positions of the Nucleus. *Orthotropal. Anatropal. Camptotropal*

Foramen or Exostome. Embryo. Suspensor.

The Impregnation of the Ovule, and the Developement of the Embryo. Hybrids.

The Fruit. Pericarp..... { *Epicarp. Sarcocarp. Endocarp or Putamen*

Columella. Commissure.

Sutures. *Dorsal. Ventral.* Pericarp. *Dehisent. Indehiscent.*

Dehiscence. *Septicidal. Loculicidal. Transverse. Porous Septifragal.* Fruit. *Simple. Multiple.*

Lecture XXXVIII.

Fruits formed of a single Carpel. *Folliele. Legume. Drupe. Achænium. Caryopsis. Utricle.*

Fruits formed of several Carpels. *Siliqua. Silicula. Nut. Cremocarp. Nuculanium, Pyxis. Etærio. Berry. Orange. Pome Pepo. Pelaustris. Cone. Pine Apple. Fig.*

THE SEED.

Funiculus. Arillus. Hilum or Umbilicus. Testa. Coma. Micropyle. Raphe. Albumen or Perisperm. Embryo.

Lecture XXXIX.

SYSTEMATIC BOTANY.

General Remarks on Artificial and Natural Systems of Classification.

The Linnean Sexual System.

The Analytic Method as applied to the determination of Orders, Genera and Species.

Lecture XL.

The Principles of the Natural Systems of Jussieu, Lindley, and De Candolle.

IV.

VEGETABLE MATERIA MEDICA.

The substances of the Vegetable Materia Medica are treated of in the following order: 1st. The Botanical Characters of the Plants yielding officinal substances. 2nd. The Physical and Chemical properties of those substances. 3rd. Their Physiological and Therapeutic Properties. 4th. The modes of their administration and their doses. 5th. Their Pharmaceutic Preparations.

Lecture XLI.

DICOTYLDONS or EXOGENS.

I. THALAMIFLORÆ.

RANUNCULACEÆ. *Jussieu.*

Helleborus Niger. Helleborus. *Radix. Tinctura Hellebori.*

Delphinium Staphisagria. Staphisagria. *Semina. Delphinia.*

Aconitum Paniculatum. Aconitum. *Folia. Radix. Extractum Aconiti. Aconitina.*

MAGNOLIACEÆ. *Decandolle.*

Drymis Winteri. *Cortex.*

MENISPERMACEÆ. *Decandole.*

Cissampelos Pareira. *Radix. Infusum Pareiræ. Extractum Pareiræ.*

Cocculus Palmatus. Calumba. *Radix. Infusum Calumbæ. Tinctura Calumbæ.*

Anamyrta Cocculus. Cocculus Indicus. Fructus. *Picrotoxine.*

Lecture XLII.

PAPAVERACEÆ. *Jussieu.*

Papaver Rhœeas. Rhœas. *Petala. Syrupus Rhœados.*

Papaver Somniferum. Papaver. *Capsulæ Maturæ. Decoctum Papaveris. Syrupus Papaveris. Extractum Papaveris.*

OPIUM. *Capsulæ Immaturæ. Succus concretus.*

Commercial varieties of Opium. *Smyrna. Constantinople. Egyptian. Persian. Himalayan. Patna. Benares. Malwa. Kandeish.*

The Analysis of Opium. Its Composition.

Morphia. Codeia. Narceia. Thebaina. Narcotine. Meconine. Meconic Acid.

The adulterations of Opium.

Lecture XLIII.

Preparations of Morphia. *Morphiæ Hydrochloras. Morphiæ Acetas.*

Physiological and Therapeutic Actions of Opium, Morphia, and Narcotine.

Preparations of Opium. *Extractum Opii Purificatum. Pilulæ Saponis Compositæ. Pilulæ Styracis Comp. Pilulæ Ipecacuanhæ Comp. Pulvis Ipecacuanhæ cum Opio. Pulvis Kino Comp. Pulvis Ipecacuanhæ Compositus. Confectio Opii. Tinctura Opii. Vinum Opii. Tinctura Camphoræ Composita. Enema Opii. Linimentum Opii. Emplastrum Opii. Unguentum Gallæ Compositum.*

Lecture XLIV.

CRUCIFERÆ. *Jussieu.*

Cochlearia Armoracia. Armoracia. *Radix. Infussum Armoraciæ Comp. Spiritus Armoraciæ Comp*

Sinapis Nigra. Sinapis. *Semina.*

Sinapis Alba. *Semina.*

Sinapisine. Myrosyne. Myronic Acid. Sulpho-Sinapisine. Cataplasma Sinapis.

POLYGALEÆ. *Jussieu.*

Polygala Senega. Senega. *Radix. Decoctum Senegæ.*

Krameria Triandra. Krameria. *Radix. Infusium Krameriæ.*

LINEÆ. *Decand.*

Linum Usitatissimum. *Lini Semina. Infusum Lini Compositum. Oleum Lini. Cataplasma Lini.*

MALVACEÆ. *Brown.*

Malva Sylvestris. Malva. *Herba. Decoctum Malvæ Compositum.*

Althœa Officinalis. *Radix. Syrupus Althææ.*

Gossipium Herbaceum and other species. Cotton.

Lecture XLV.

BITITNERIACEÆ. *Brown.*

Theobroma Cacao. Semina. *Cocoa. Chocolate.*

DIPTEROCARPEÆ. *Blume.*

Dryobalanops Camphora. *Borneo Camphor.*

TERNSTRÆMIACEÆ. *Decand.*

Thea Viridis. Thea Bohea. *Theine.*

AURANTIACEÆ. *Cortex.*

Citrus Vulgaris. *Seville Orange.* Aurantii Cortex. Fructus Cortex exterior. *Confectio Aurantii. Syrupus Aurantii. Infusum Aurantii Comp. Tinctura Aurantii. Aurantii Oleum. Aqua Florum Aurantii.*

Citrus Aurantium. *Sweet Orange.* Aurantii Fructus et Flores. *Aurantii Oleum e Floribus Distillatum; or Neroli Oil.*

Citrus Limetta *var:* Bergamium. *Bergamii Oleum.*

Citrus Medica. *The Citron.*

Citrus Limonum. *The Lemon. Fructus Cortex Exterior. Limonum Oleum e Fructus Cortice Exteriori Destillatum. Limonum Succus. Syrupus Limonum. Acidum Citricum.*

Lecture XLVI.

GUTTIFERÆ. *Jussieu.*

Stalagmites Cambogioides. *Gambogia. Gummi Resina.*

Hebradendron Cambogioides. Ceylon Gamboge.

Hebradendron Sp: ? Siam Gamboge. *Pilulæ Cambogiæ Compositæ.*

Canella Alba. *Cortex.*

MELIACEÆ. *Decand.*

Azadiracta Indica. *Cortex.*

Lecture XLVII.

VINIFERÆ. *Jussieu.*

Vitis Vinifera. Uva. *Baccæ Exsiccatæ Demptis Acinis.* Wines

have been already treated of under the head of Alcohol in Lecture IX.

Acidum Tartaricum.

OXALIDEÆ. *Decand.*

Oxalis Acetosella. *Acidum Oxalicum.*

ZYGOPHYLLEÆ. *Brown.*

Guaiacum Officinale. *Lignum. Resina. Mistura Guaiaci. Tinctura Guaiaci. Tinctura Guaiaci Composita.*

RUTEÆ. *Jussieu.*

Ruta Graveolens. *Folia. Confectio Rutæ.*

DIOSMEÆ. *Jussieu.*

Diosma Crenata. *Diosmæ Folia.*

Barosma Crenata. B. Serratifolia. B. Crenulata. *Infusum Diosmæ.*

Galipea Cusparia. *Cusparia Cortex. Cusparin. False Angustura Bark from Strychnos Nux Vomica. Infusum Cusparia.*

Lecture XLVIII.

SIMARUBEÆ. *Richard.*

Quassia Amara. *Surinam Quassia. Lignum.*

Picræna Excelsa (Quassia Excelsa) *Jamaica Quassia. Lignum. Quassine. Infusum Quassiæ.*

Simaruba Officinalis. *Simarubæ Radicis Cortex. Infusum Simarubæ.*

II. CALICYFLORÆ.

RHAMNEÆ. *Brown.*

Rhamnus Catharticus. *Baccæ. Syrupus Rhamni.*

TEREBINTHACEÆ. *Jussieu.*

Pistacia Terebinthus. *Terebinthus Chia. Resina Liquida.*

Pistacia Lentiscus. *Mastiche Resina.*

Rhus Toxicodendron. *Folia.*

Boswellia Serrata. B. Thurifera. *Olibanum. Gummi. Resina.*

Balsamodendron Myrrha. *Gummi-Resina. Myrrha.*

Balsamodendron Gileadense. B. Opobalsamum. *Tinctura-Myrrhæ.*

Amyris Elemifira. Elemi.

Elaphrium Elemiferum. Mexican Elemi.

Icica Icicariba. Brazilian Elemi.

Canarium Commune. Manilla Elemi.

Lecture XLIX.

LEGUMINOSÆ. *Jussieu.*

Sub-Order. MIMOSEÆ.

Acacia Vera. A. Arabica. *Acaciæ Gummi. Mistura Acaciæ. Arabine.*

Acacia Catechu. *Catechu. Ligni Extractum.* Infusum Catechu Compositum. Tinctura Catechu.

Sub-Order. CÆSALPINEÆ.

Hæmatoxylon Campechianum. *Lignum. Extractum Hæmatoxyli.*

Tamarindus Indica. *Leguminis Pulpa.*

Lecture L.

Cassia Fistula. Leguminum Pulpa. *Confectio Cassiæ.*

Cassia Lanceolata. C. Obovata and other Species. *Sennæ Folia.*

Commercial varieties of Senna. *Tinnevelly. Madras. Bombay or common Indian Senna. Alexandria. Tripoli Senna. Aleppo Senna.*

Adulterations of Senna. *Cynanchum Argel. Coriaria Myrtifolia. Tephrosia Apollinea. Colutea Arborescens. Infusum Sennæ Comp. Tinctura Sennæ Comp. Syrupus* Sennæ. *Confectio Sennæ.*

Copaifera Langsdorfii. C. Officinalis and other Species. *Copaiba. Liquid Oleo-Resina. Oleum Copaibæ.*

Sub-Order. PAPILIONACEÆ.

Myroxylon Peruiferum..... { Balsam of Peru. / Balsam of Tolu.

Tinctura Balsami Tolutani. Syrupus Tolutanus.

Pterocarpus Santalinus. *Lignum.*

Pterocarpus Erinaceus. *African Kino.*

Pterocarpus Marsupium. *Malabar Kino. Tinctura Kino. Pulvis Kino Comp.*

Butea Frondosa.

Spartium (Cytisus) Scoparium. *Cacumina Recentia. Infusum Scoparii. Decoctum Scoparii Comp.*

Glycirrhiza Glabra. *Radix Recens. Extractum Glycirrhizæ.*

Astragalus Verus. A. Gummifer and other Species. *Tragacantha Succusconcretus. Pulvis Tragocanthæ Compositus.*

Mucuna Pruriens. *Mucuna. Leguminum Pubes.*

Lecture LI.

ROSACEÆ. *Endlicher.*

Sub-Order. ROSEÆ.

Potentilla Tormentilla. *Tormentillæ Radix. Decoctum Tormentillæ.*

Rosa Canina. *Fructus Pulpa. Confectio Rosæ Caninæ.*

Rosa Gallica. *Petala. Infusum Rosæ Comp. Confectio Rosæ Gallicæ. Mel Rosæ.*

Rosa Centifolia. *Petala. Rosæ Oleum. Attar of Roses. Aqua Rosæ.*

Sub-Order. POMEÆ.

Cydonia Vulgaris. *Cydoniæ Semina. Decoctum Cydoniæ.*

Sub-Order. AMYGDALEÆ.

Amygdalus Communis. *var. Dulcis. Amygdalæ Dulces. Emulsine or Synaptase. Confectio Amygdalæ. Mistura Amygdalæ Oleum Amygdalæ.*

Amygdalus Communis. *var.* Amara. Amygdalæ Amaræ. *Amygdaline. Oil of Bitter Almonds. Benzoyle.*

Prunus Domestica. *Drupæ Exsiccatæ.*

Prunus Lauro-Cerasus. *Folia. Aqua Lauro-Cerasi.*

Hydrocyanic Acid already treated of in Lecture XI.

Lecture LII.

MYRTACEÆ. *Brown.*

Melaleuca Cajaputi. *Cajaputi Oleum e Foliis Destillatum.*

Caryophyllus Aromaticus. *Caryophyllus. Flores nondum explicati, exsiccati. Oleum Caryophylli. Infusum Caryophylli.*

Eugenia Pimenta. Pimenta. *Baccæ Immaturæ Exsiccatæ. Oleum Pimentæ. Spiritus Pimentæ. Aqua Pimentæ.*

Punica Granatum. *Granati Fructus Cortex et Radicis Cortex.*

Lecture LIII.

CUCURBITACEÆ. *Jussieu.*

Cucumis (Citrullus) Colocynthis. Colocynthis. *Peponum Pulpa Exsiccata. Colocynthine. Extractum Colocynthidis. Extractum Colocynthidis Comp. Enema Colocynthidis.*

Memordica Elaterium. *Elaterium. Pepones Recentes. Elaterine Extractum Elaterii.*

Lecture LIV.

UMBELLIFERÆ. *Jussieu.*

I. YIELDING AROMATIC VOLATILE OIL.

Carum Carui. *Fructus. Caraway. Oleum Carui. Spiritus Carui. Aqua Carui.*

Pimpinella Anisum. *Fructus. Anise. Oleum Anisi. Spiritus Anisi.*

Fæniculum Vulgare. *Common Fennel.*

Fæniculum Dulce. *Sweet Fennel. Oleum Fæniculi. Aqua Fæniculi.*

Anethum Graveolens. *Common Dill. Aqua Anethi.*

Daucus Carota. *Fructus. Radix Recens. Carrot.*

Cuminum Cyminum. *Common Cumin.*

Coriandrum Sativum. *Coriander.*

Lecture LV.

II. YIELDING FŒTID GUM RESINS.

Opopanax Chironum ? *Opopanax. Gummi Resina.*

Ferula Sp ? *Sagapenum. Gummi Resina. Pilulæ Sagapeni Compositæ.*

Narthex Assafœtida. *Assafœtida. Gummi Resina. Mistura Assafœtidæ. Tinctura Assafœtidæ.*

Dorema Ammoniacum. *Mistura Ammoniaci. Emplastrum Ammoniaci.*

Opoidia Galbanifera ? *Galbanum. Gummi Resina Pilulæ Galbani Comp. Emplastrum Galbani.*

III. YIELDING A NARCOTIC PRINCIPLE.

Conium Maculatum. *Conii Folia. Extractum Conii. Tinctura Conii. Pilulæ Conii Comp. Cataplasma Conii.*

Lecture LVI.

III. COROLLIFLORÆ.

RUBIACEÆ. *Jussieu.*

Rubia Tinctorum. *Radix.*

Cephaelis Ipecacuanha. *Ipecacuanhæ Radix. Emetine.*

Adulterations of Ipecacuan. *Psychotria Emetica. Richardsonia Scabra.*

Vinum Ipecacuanhæ. Pulvis Ipecacuanhæ Comp. Pilulæ Ipecacuanhæ Compositæ.

Coffea Arabica. *Semina. Caffeine.*

Cinchona Lancifolia.... } Crown or Loxa Bark.. } *Cinchona Pallida.*
Cinchona Condaminea.. }
Cinchona Micrantha.... Grey or Silver Bark... }

Cinchona Cordifolia. *Yellow Bark. Cinchona Flava.*

Cinchona Oblongifolia. *Red Bark. Cinchona Rubra.*

The Chemistry of Cinchona Bark. *Quina. Cinchonia. Aricina. Kinic Acid. Cinchonic Red. Cinchonic Yellow.*

Quinæ Disulphas. Quinæ Sulphas. Quinoidine.

Adulterations of Quinine.

Infusum Cinchonæ. Decoctum Cinchonæ Cordifoliæ. Tinctura Cinchonæ. Tinctura Cinchonæ Comp. Extractum Cinchonæ Corfoliæ. Extractum Cinchonæ Lancifoliæ. Extract. Cinchonæ Oblongifoliæ.

Lecture LVII.

VALERIANEÆ. *Decand.*

Valeriana Officinalis. *Valerianæ Radix. Tinctura Valerianæ. Tinctura Valerianæ Comp.*

COMPOSITÆ. *Adans.*

Inula Helenium. *Inulæ Radix. Inuline. Helenine.*

Anthemis Nobilis. *Flores Simplices. Infusum Anthemidis. Oleum Anthemidis.*

Anthemis Pyrethrum. *Pyrethri Radix.*

Artemisia Absinthium. *Absinthium. Flowering Tops.*

Arnica Montana. *Folia et Radix.*

Leontodon Taraxacum. *Taraxaci Radix. Extractum Taraxaci.*

Lactuca Sativa. *Lactucarium. Succus Spissatus. Extractum Lactucæ.*

Lactuca Virosa. Lactucarium. Succus Spissatus. *Lactucine.*

LOBELIACEÆ. *Jussieu.*

Lobelia Inflata. *Herba. Lobeline.*

Lecture LVIII.

ERICACEÆ. *Endlicher.*

Arctostaphylos Uva Ursi. *Uvæ Ursi Folia. Decoctum Uvæ Ursi. Extractum Uvæ Ursi.*

Chimaphilla Corymbosa. *Chimaphillæ Folia. Decoctum Chimaphillæ.*

STYRACEÆ. *Richard.*

Styrax Officinalis. *Styrax Balsamum. Styrax Colatus. Pilulæ Styracis Compositæ.*

Styrax Benzoin. *Benzoin. Balsamum. Tinctura Benzoini Composita. Acidum Benzoicum.*

OLEACEÆ. *Lindley.*

Olea Europea. *Olivæ Oleum. Elaeine. Margarine.*

Sapo.

Sapo Mollis. Chemistry of Saponification. Margaric, Stearic, and Elaeic Acids. Glycerine. Pilulæ Saponis Comp. Linimentum Saponis. Ceratum Saponis. Emplastrum Saponis.

Fraxinus Ornus. *Manna. Mannite.*

ASCLEPIADEÆ. *Lindley.*

Asclepias Curassavica. *Radix.*

Calotropis Gigantea. *Mudar.*

STRYCHNEACEÆ. *Endlicher.*

Strychnos Nux Vomica. *Semina. False Angustura Bark. Strychnia. Brucia.*

Lecture LIX.

GENTIANEÆ. *Jussieu.*

Gentiana Lutea. *Gentianæ Radix. Infusum Gentianæ Comp. Mistura Gentianæ Comp. Tinctura Gentianæ Comp. Extractum Gentianæ.*

Ophelia Chirata. Chiretta. Herba et Radix. *Infusum Chiretta.*

CONVOLULACEÆ. *Brown.*

Ipomæa Jalapa.... } *Jalapæ Radix.*
Ipomæa Purga.... }

Pulvis Jalap. Comp. Tinctura Jalapæ. Extractum Jalapæ.

Convolvulus Scammonia. *Scammonium. Adulterations of Scammony. Pulvis Scammonii Comp. Confectio Scammonii.*

Lecture LX.

LABIATÆ. *Jussieu.*

Lavandula Vera. L. Spica. *Lavandulæ Flores. Oleum Lavandulæ. Spiritus Lavandulæ. Tinctura Lavandulæ Comp.*

Mentha Viridis. *Herba. Oleum Menthæ Viridis. Aqua Menthæ Viridis. Spiritus Menthæ Viridis.*

Mentha Piperita. *Herba. Oleum Menthæ Piperitæ. Aqua Menthæ Piperitæ. Spiritus Menthæ Piperitæ.*

Mentha Pulegium. *Herba. Oleum Menthæ Pulegii. Aqua Menthæ Pulegii. Spiritus Menthæ Pulegii.*

Rosmarinus Officinalis. *Cacumina. Oleum Rosmarini. Spiritus Rosmarini.*

Origanum Vulgare. *Herba. Oleum Origani.*

Marrubium Vulgare. *Herba.*

ACANTHACEÆ. *Brown.*

Justicia Paniculata. *Stems. Kreat. Infusum Kreat.*

SCROPHULARINEÆ. *Brown.*

Digitalis Purpurea. *Digitalis Folia. Digitaline. Infusum Digitalis. Tinctura Digitalis. Extractum Digitalis.*

Lecture LXI.

SOLANEÆ. *Jussieu.*

Solanum Dulcamara. *Dulcamaræ Caulis. Decoctum Dulcamaræ.*

Atropa Belladonna. *Belladonnæ Folia. Atropia. Extractum Belladonnæ. Emplastrum Belladonnæ.*

Capsicum Annuum. *Capsici Baccæ. Capsicine. Tinctura Capsici.*

Datura Stramonium. *Stramonii Folia et Semina. Daturia. Extractum Stramonii.*

Hyoscyamus Niger. *Hyoscyami Folia. Hyoscyamia. Extractum Hyoscyami. Tinctura Hyoscyami.*

Nicotiana Tabacum. *Tabaci Folia Exsiccata. Nicotina. Nicotianine. Enema Tabaci.*

Lecture LXII.

IV. APETALÆ.

POLYGONEÆ. *Jussieu.*

Rheum Palmatum, R. Undulatum and other Species. *Rhei Radix.*

Commercial varieties of Rhubarb. *Russian or Turkey. Bucharian. Chinese or East Indian. Himalayan. English.*

RHABARBERIC ACID.

Pilulæ Rhei Comp. Extractum Rhei. Infusum Rhei. Tinctura Rhei Comp.

THYMELEÆ. *Jussieu.*

Daphne Mezereum. *Mezerei Radicis Cortex. Daphnine.*

MYRISTICEÆ. *Brown.*

Myristica Moschata *or* Officinalis. *Myristicæ Nuclei. Myristicæ Arillus (Mace.)*

Myristicæ Oleum Expressum. Oleum Myristicæ. Spiritus Myristicæ.

Lecture LXIII.

LAURINEÆ. *Brown.*

Laurus Nobilis. *Lauri Folia. Lauri Baccæ.*

Laurus Sassafras. *Sassafras Radix. Oleum Sassafras.*

Laurus Camphora. *Camphora. Camphogene. Camphoric Acid. Mistura Camphoræ. Tinctura Camphoræ. Tinctura Camphoræ Comp. Linimentum Camphoræ. Linimentum Camphoræ Compositum.*

Laurus Cinnamonum, or Cinnamonum Zeylanicum. *Cinnamomi Cortex. Cinnamyle. Cinnamic Acid. Oleum Cinnamomi. Pulvis Cinnamomi Comp. Aqua Cinnamomi. Spiritus Cinnamoni. Tinctura Cinnamomi. Tinct. Cinnamomi Comp.*

Laurus Cassia or Cinnamomum Iners. *Cassiæ Cortex. Cassia Buds.*

Nectandra Rodiei. *Lignum. Beberine. Sulphate of Beberine.*

ARISTOLOCHIÆ. *Jussieu.*

Asarum Europeum. *Asari Folia.*

Aristolochia Serpentaria. *Serpentariæ Radix. Infusum Serpentariæ. Tinctura Serpentariæ.*

Aristolochia Indica, and other Species. *Remarks on their supposed virtues as antidotes to Snake Bites.*

Lecture LXIV.

EUPHORBIACEÆ. *Jussieu.*

Croton Cascarilla. *Cascarillæ Cortex. Cascarilline. Infusum Cascarillæ. Mistura Cascarillæ Composita. Tinctura Cascarillæ.*

Croton Tiglium. *Tiglii Oleum. Crotonine. Crotonic Acid.*

Ricinus Communis. *Ricini Oleum. Adulterations of Croton and Castor Oils.*

Jatropha *(Janipha)* Manihot. *Tapioca.*

Euphorbia Officinarum. *Euphorbium.*

PIPERACEÆ. *Richard.*

Piper Longum. *Fructus immaturus Exsiccatus.*

Piper Nigrum. *Baccæ.* BLACK AND WHITE PEPPER. *Piperine. Volatile Oil. Acid Resin. Confectio Piperis Nigri.*

Piper Cubeba. *Cubebæ. Baccæ. Cubebine. Oil of Cubebs. Tinctura Cubebæ.*

Lecture LXV.

URTICEÆ. *Jussieu.*

Humulus Lupulus. *Lupulus. Strobili Exsiccati. Lupuline. Infusum Lupuli. Tinctura Lupuli. Extractum Lupuli.*

Cannabis Sativa. *The Stem. Hemp. Churrus. Ganjah. Bang. Extractum Cannabis. Tinctura Cannabis.*

Morus Nigra. *Mori Fructus. Syrupus Mori.*

Ficus Carica. *Fici. Fructus Siccatus.*

Dorstenia Contrajerva. *Contrajervæ Radix.*

AMENTACEÆ. *Jussieu.*

Salix Fragilis. S. Alba. S. Caprea. *Salicine.*

Quercus Pedunculata. *Quercus Cortex. Tannin or Tannic Acid. Tanno-Gelatine. Gallic Acid. Decoctum Quercus.*

Quercus Infectoria. *Gallæ.*

The Insect *Cynips Gallæ Tinctorum. Tinctura Gallæ. Unguentum Gallæ Compositum.*

Lecture LXVI.

CONIFERÆ. *Jussieu.*

Pinus Sylvestris, and other Species of Pinus and Abies. *Terebinthina vulgaris.*

Pinus Maritima. *Bordeaux Turpentine.*

Pinus Palustris and P. Fæda. *American Turpentine.*

Pinus (Abies) Balsamea. *Terebinthina Canadensis.*

Pinus Abies *or* Abies excelsa. *Abietis Resina. Pix Abietina. Burgundy Pitch. Emplastrum Picis.*

Larix Europæa. *Terebinthina Veneta. Venice Turpentine.*

Resina. *Colophony. Resina Flava. Sylvic, Pinic, and Colophonic Acids. Ceratum Resinæ.*

Terebinthinæ Oleum. *Oleum Terebinthinæ Purificatum. Linimentum Terebinthinæ. Enema Terebinthinæ.*

Pix Liquida. *Tar.* *Unguentum Picis Liquidæ.*

Pix Nigra. Pitch. *Unguentum Picis Nigræ.*

Juniperus Communis. *Juniperi Cacumina et Fructus.* *Oleum Juniperi.* *Spiritus Juniperi Compositus.*

Juniperus Sabina. *Sabinæ Cacumina Recentia et Exsiccata.* *Oleum Sabinæ.* *Ceratum Sabinæ.*

Lecture LXVII.

MONOCOTYLEDONS, or ENDOGENS.

PALMÆ. *Jussieu.*

Areca Catechu. *Betelnut Palm.*

Phœnix Dactilifera. *The Date Palm.*

Cocos Nucifera. *Cocoanut Palm.*

Borassus Flabelliformis. *The Thar Palm.*

Sagus Rumphii. *Sago Palm.* *Sago.*

LILIACEÆ. *Decand.*

Allium Sativum. *Bulbus.* *Garlic.*

Allium Cepa. *Bulbus.* *Onion.*

Allium Porrum. *Bulbus.* *Leek.*

Scilla Maritima. *Scillæ Bulbus Recens.* *Scillitine.* *Pilulæ Scillæ Compositæ.* *Acetum Scillæ.* *Oxymel Scillæ.* *Tinctura Scillæ.*

Aloe Spicata and other Species. *Aloe Inspissated Juice of the Leaves.*

Commercial varieties of Aloes. *Socotrine.* *Hepatic.* *Barbadoes.* *Cape-Aloes.* *Aloisine.* *Extractum Aloes Purificatum.* *Pulvis Aloes Comp.* *Pilulæ Aloes Compositæ.* *Pilulæ Aloes cum Myrrha.* *Decoctum Aloes Compositum.* *Vinum Aloes.* *Tinctura Aloes.* *Tinctura Aloes Composita.*

Lecture LXVIII.

MELANTHACEÆ. *Brown.*

Colchicum Autumnale. *Colchici Cormus et Semina.* *Colchicina.* *Extractum Colchici Aceticum.* *Acetum Colchici.* *Vinum Colchici.* *Tinctura Colchici Composita.* *Tinctura Colchici.*

Veratrum Album. *Veratri Rhizoma.* *Decoctum Veratri.* *Unguentum Veratri.* *Vinum Veratri.*

Asagræa Officinalis. Veratrum Sabadilla. *Sabadillæ Semina.* *Veratria.*

SMILACEÆ. *Brown.*

Smilax Officinalis, and other Species. *Sarzæ Radix.*

Commercial varieties of Sarsaparilla. *Jamaica. Brazilian. Honduras. Lima. Smilacine. Decoctum Sarzæ. Decoctum Sarzæ Compositum. Extractum Sarzæ. Syrupus Sarzæ.*

Lecture LXIX.

ORCHIDEÆ. *Jussieu.*

Vanilla Aromatica. *Semina.*

Orchis Morio. O. Mascula, and other Species. *Salep.*

CANNEÆ. *Brown.*

Maranta Arundinacea. *Arrowroot.*

SCITAMINEÆ. *Brown*

Zingiber Officinale. *Rhizoma. Ginger. Tinctura Zingiberis. Syrupus Zingiberis.*

Curcuma Longa. *Rhizoma. Turmeric.*

Alpinia Cardamomum. *Cardamomi Semina. Tinctura Cardamomi. Tinctura Cardamomi Composita.*

IRIDEÆ. *Jussieu.*

Crocus Sativus. *Croci Stigmata Exiccata. Syrupus Croci.*

GRAMINEÆ. *Jussieu.*

Avena Sativa. *Semina. The Oat.*

Hordeum Distichon. *Semina. Barley. Decoctum Hordei. Decoctum Hordei Comp.*

Secale Cereale. *Semina. Rye. Ergot of Rye treated of in* Lecture LXX.

Triticum Hybernum. *Semina. Wheat. Farina. Flour. Amylum. Starch. Decoctum Amyli.*

Saccharum Officinarum. *Saccharum. Sacchari Fæx. Treacle. Molasses. Syrupus.*

Lecture LXX.

ACOTYLEDONS *or* CRYPTOGAMIÆ.

FILICES. *Jussieu.*

Aspidium Filix Mas. *Rhizoma.*

LICHENES. *Jussieu.*

Cetraria Islandica. *Decoctum Cetrariæ.*

Roccella Tinctoria and other Species. *Lacmus. Litmus.*

ALGÆ. *Jussieu.*

FUNGI. *Jussieu.*

Ergota. *Oil of Ergot. Extract of Ergot.*

V.

ANIMAL MATERIA MEDICA.

Lecture LXXI.

The principles of Zoological Classification are not considered : as they more closely pertain to the subjects of Comparative Anatomy and Physiology.

Hirudo Officinalis. H. Medicinalis. Leeches. The Natural History of the Leech. Uses and application of Leeches. Cautions in the use of Leeches. Quantity of blood abstracted.

Cantharis vesicatoria (Lytta vesicatoria) *Blister Fly.*

Mylabris Cichorii. *Goozerat Blister Fly. Cantharidine.*

Tinctura Cantharidis. Acetum Epispasticum. Ceratum Cantharidis. Unguentum Cantharidis. Emplastrum Cantharidis.

Coccus Cacti. *Cochineal.*

Apis Mellifica. *Mel. Honey. Cera. Wax. Cera Flava. Cera Alba. Ceratum. Emplastrum Ceræ.*

Ostræa Eduiis. Oyster. Testæ. *Testæ Preparatæ.*

Acipenser various Species. *The Swimming Bladder. Icthyocolla. Isinglass. Gelatine.*

Lecture LXXII.

Gallus Domesticus (Phasianus Gallus) Ovum.

Physeter Macrocephalus. *Cetaceum. Spermaceti. Cetine. Ceratum Cetacei. Unguentum Cetacei.*

Cervus Elaphus. *Cornu. Stag's Horn. Cornu Ustum.*

Moschus Mosciferus. *Moschus. Musk. Mistura Moschi.*

Ovis Aries. The Sheep. *Sevum. Suet.*

Castor Fiber. The Beaver. *Castoreum. Tinctura Castorei*

APPENDIX (D).

MEMORANDUM OF THE COURSE OF LECTURES ON THE PRACTICE OF MEDICINE, DELIVERED IN THE GRANT MEDICAL COLLEGE IN THE SESSION 1848-49.

BY

C MOREHEAD, M.D

The course of Lectures on the Practice of Medicine was arranged in six principal divisions :—

I. Diseases of the Abdomen.

II. Diseases of the Chest and Vascular System.

III. Diseases of the Brain, the Spinal Cord, Nervous System and Organs of Sense.

IV. Diseases probably dependent on altered constitution of the Blood, from mal-assimilation or retention of excretions.

V. Diseases supposed to proceed from Endemic, Epidemic and Contagious causes.

VI. Female Diseases depending on Sexual characteristics, excluding those dependent on the states of Pregnancy and Parturition.

Division I. Consisted of 22 Lectures and the diseases were considered in the following order :—

1st. Those of the Peritoneum. Peritonitis in its various forms, Ascites, Cancerous and Hydatid degenerations of the Peritoneum.

2nd. Diseases of the Stomach. Gastritis Acute and Chronic, Gastric Hæmorrhage, Hæmatemesis, Dyspepsia.

3rd. Diseases of the Intestinal Canal. Colic, Ileus, Colica Pictonum, Enteritis, Muco-enteritis, Gastro-Enteritis, Dysentery, Diarrhœa, Tabes Mesenterica, Melæna, Hæmorrhoids, Intestinal Entozoa.

4th. Diseases of the Liver. Hepatitis, Abscess in the Liver, Cirrhosis, Congestion of the Liver, Fatty degeneration, Scrofulous en-

largement, Cancerous degeneration, Hydatid formations, Inflammation of the Mucous lining of the Gall-Bladder and Gall-ducts, Biliary Calculi, Jaundice.

5th. Diseases of the Spleen and Pancreas.

6th. Diseases of the Kidneys, Nephritis, Perinephritis, Pyelitis, Pyelo-Nephritis. The altered conditions of the urine in Nephritis, in Bright's Disease, Chylo-serous urine, Ischuria Renalis, Diabetes, Oxalic Acid Diathesis, Uric Acid Diathesis, Phosphatic Diathesis, Hæmaturia, Cystitis.

7th. As a transition to the diseases of the next division, the diseases of the Mouth and Throat are considered, Stomatitis Apthosa, Mercurialis, Ulcerosa, Gangræna Oris, Glossitis, Parotitis, Pharyngitis, Diptheritis, Cynanche Maligna, Cynanche Tonsillaris, Hypertrophy of the Tonsils. Venereal affections of the Throat and diseases of the Œsophagus are alluded to.

Division II. Consisted of 16 Lectures.

1st. Diseases of the Larynx and Trachea, Laryngitis, Cynanche Trachealis, Spasm of the Glottis.

2nd. Diseases of the Lungs, Coryza, Catarrh, Bronchitis. Constriction and dilatation of the Bronchial Tubes, Asthma, Hooping Cough, Pleuritis, Pneumonia, Pulmonary Emphysema, Hæmoptysis, Pulmonary Apoplexy, Pulmonary Œdema, Phthisis Pulmonalis, Pneumo-thorax, Carcinomatous and Melœnotic degenerations.

3rd. Diseases of the Heart and Vascular system.

Pericarditis, Endo-Carditis, Carditis, Hypertrophy and Dilatation of the Heart, Diseases of the Valves of the Heart, Palpitation, Syncope, Angina Pectoris, Arteritis, Aneurism of the Aorta, Phlebitis.

Division III. Consisted of 11 Lectures.

1st. Diseases of the Brain. Meningitis, Cerebritis, Encephalitis Acute Hydrocephalus, Apoplexy Simple, Serous, Sanguineous, Chronic Hydrocephalus, Tubercular deposits, Growth of tumours in the Brain, Delirium Tremens, Cephalalgia, Insanity.

2nd. Diseases of the Spinal Cord—Meningitis of the Cord, Myelitis, Hydro-rachis, Spinal Apoplexy, Tetanus, Hydrophobia.

3rd. Diseases of the general nervous system, Epilepsy, Chorea, Hysteria, Paralysis, Anæsthesia, Catalepsy, Ecstacy, (Somnambulism and Mesmerism alluded to), Neuralgia.

4th. Diseases of Organs of sense, Amaurosis, Otitis, Epistaxis. Diseases of the Skin very shortly considered.

Division IV. Consisted of 4 Lectures on Rheumatism, Gout, Scurvy, Beriberi, Purpura Hœmorrhagica, Cachexia Scrofulous, Scorbutic, Syphilitic, Leprous, Malarious, Mercurial.

Division V. Consisted of 9 Lectures on Intermittent and Remittent Fever, Continued Fever Synocha, Synochus, Typhus, Yellow Fever, Plague, allusion to the Pali Disease, Small-pox, Chicken-pox, Rubeola, Scarlatina, Erysipelas, Erythema, Epidemic Cholera, Influenza.

Division VI. Consisted of 8 Lectures on Chlorosis, Amenorrhæa, Vicarious Menstruation, Dysmenorrhæa, Menorrhagia, Leucorrhæa, Metritis, Hysteralgia, Fibrous Tumours of the Uterus, Polypus of the Uterus, Cauliflower excrescence and Carcinoma of the Uterus, Hydrometra, Physometra, Uterine moles, Hydatids of the Uterus Relaxation, Prolapsus, Procidentia, Incersion, Anteversion, Anteflexion, Retro-version, Retro-flexion of the Uterus, Ovaritis, Dropsy of the Ovary, Structural disease of the Ovary.

In all, 71 Lectures were given and under each Disease, the modifications caused by difference of sex and of age, were alluded to;—so that the course included the leading peculiarities of the diseases of children. Each disease for the most part was treated after the following order.

The diseases of the different Organs were prefaced by a short notice of the relative and structural Anatomy and Physiology of the Organ.

The diseases, which consist in derangement of the Capillary circulation and its results, were first considered. This included inflammations with effusions of lymph, ulceration, mortification; determination of blood and congestion including dropsies, fluxes, and hœmorrhages.

The diseases which consist in perversions of nutrition were then considered, including Hypertrophy, Induration, Tubercle, Carcinoma, &c.

The diseases which consist in derangement of function, independent of cognizable structural derangement, were then treated of. This included many of the derangements of muscular contractility, spasm and atony of hollow organs,—also many derangements of secretion.

In treating each disease the Symptoms were first detailed the Pathology was then explained, The Medical treatment was set forth and then the Causes, predisposing and excitings were stated and lastly the modifications under each of the above heads, consequent on difference of sex and difference of age were discussed.

C. Morehead,
Professor of Medicine.

APPENDIX (E.)

MEMORANDUM OF THE SUBJECTS OF INSTRUCTION

IN THE

COURSE OF CLINICAL MEDICINE,

IN THE

GRANT MEDICAL COLLEGE FOR THE SESSION 1848-49

From the 1st July 1848 to the 15th April 1849, there were received into the Clinical ward 183 sick the subjects of the following Diseases.

FEVERS.

Ephemeral		3	
Intermittent Fever	Quotidian	22	
	Tertian	1	
	C. Cerebral Symptoms	2	
	C. Enlarged Spleen	12	
	C. Bronchitis	1	
	Pneumonia	3	
	Gastric Symptoms	1	
			46
Remittent Fever	Simple	6	
	C. Enlarged Spleen	1	
	C. Jaundice	10	
	C. Hepatitis	1	
	Head Symptoms	4	
	Bronchitis	3	
	Pneumonia	4	
			29

ABDOMINAL DISEASES.

Hepatitis	5	Colic	1
Hepatic Abscesses	4	Ascites from Enlarged Liver and Spleen	1
Jaundice	3	Brights Disease of the Kidney: Gl. Dropsy	8
Dysentery	24	Dysentery.	1
Peritonitis	3		
Gastro-enteritis	1		
			51

Thoracic Diseases

Pneumonia	14	Laryngitis Chronic	1
Phthisis Pulmonalis	9	Ulcerated Sore throat	2
Hœmoptysis	1	Pericarditis	5
Pleuritis	2	Disease of the Heart	2
Bronchitis	5	Aneurism of Aorta	2
Asthma	1		45
Pleurodynia	1		

Diseases of the Nervous System.

Apoplexy	1	Tetanus Idiopathic	1
Cephalalgia	1		5
Delirium Tremens	2		

Other Diseases.

Rheumatism	4	Cachexia	1
Rubeola	1		
Secondary Syphilis	1	Total	183

As it was the invariable practice to make each case, which was received into the Clinical ward, the subject of practical comment, either on the discharge of the patient or at some period of his residence— a consideration of the above list will shew, that there has been ample opportunity of demonstrating to the Students many important practical facts relating to disease.

In the Malarious Fevers there has been a good deal of variety, depending on the different stages of disease at which the individuals came under treatment, as well as on the circumstance of the fevers being complicated with much variety of local disease. Moreover the subjects of the febrile diseases were of different classes of the community, who had necessarily been exposed, in different degrees, to the predisposing and exciting causes of disease. It was the aim in the clinical observations made on these cases to illustrate the etiology of fevers as well as the treatment, and in the treatment and the observations to which it gave rise, it was a main object to inculcate the principle—of the varied and constantly changing indications which it was necessary to keep in view in the treatment of each instance of the disease. Modifications depending, it was explained, on the constitution and age of the individual, the stage and duration of the disease, the nature of the local complication; and much pains were taken to disabuse the students of the too common popular belief that fevers were all alike and to be treated all by the same means.

There was also during the session a fair opportunity of practically treating of many of the important Abdominal diseases, such as Hepatitis and Abscess, of the Liver, Dysentery, Peritonitis. The many instances of Bright's disease of the Kidney, marked by urine albuminous and of low density and in the greater number attended with general Dropsy, supplied the opportunity of reviewing the whole subject of dropsical diseases.

The field of study of Thoracic diseases far exceeded my expectation and afforded a very favorable occasion of frequently demonstrating and explaining the physical signs of all the important diseases of the Lungs, and many of those of the Heart and Aorta. Indeed the intelligent and industrious Students have, considering that they have only studied practice of Medicine for eight months, a very respectable knowledge of the value of the principal diagnostic indications derivable from percussion and the Stethoscope.

The opportunity of studying the diseases of the Nervous system has been the most limited, but attention will be given to this during the next course.

Though the students have had their attention chiefly confined to the clinical wards yet the opportunity has always been taken advantage of pointing to occurrences of practical interest in the other wards of the Hospital. For example they were encouraged to watch the cases of Small-pox which were from time to time under treatment, and several instances of the marked modifying influence of Vaccination were particularly brought to their notice. The frequent admissions of Tetanus into the Hospital have also given the students a practical acquaintance with the phenomena of that disease, far exceeding what the mere experience of the clinical ward was calculated to impart.

Of the 183 cases of disease treated in the clinical ward 42 terminated fatally, viz.

Remittent Fever C. Jaundice	4	Laryngitis Chronic	1
Do. Head Symptoms	2	Pericarditis	1
Do. Pneumonia	2	Diseased Heart	2
Hepatic Abcesses	3	Aneurism of the Aorta	2
Dysentery	5	Tetanus *Idiopathic*	1
Peritonitis	1	Apoplexy	1
Bright's Disease	1	Cachexia	1
Pneumonia	7		
Phthisis Pulmonalis	7	Total	42
Pleuritis	1		

As, in by far the greater proportion of fatal cases, a careful examination of the body after death was made and the morbid appearances pointed out and explained, both in relation to the symptoms during life and the train of diseased processes, it must be evident, that the students have had a very fair opportunity of becoming familiar with many of the important facts of Morbid Anatomy

C. Morehead,
Professor of Medicine

APPENDIX (F).

MEMORANDUM OF THE COURSE OF SURGERY.

1*st Division.*—Inflammation,—its results and varieties, including ulceration and the different forms of Ulcers, Erysipelas, Furunculus, Carbuncle and Malignant Pustule. *Under this head* 8 *Lectures were given.*

2*nd Division.*—Mechanical and Chemical Injuries. Wounds. Modes of stopping hæmorrhage. *Consequences of wounds*—Hydrophobia. Tetanus. *Venereal Disease.* Burns and scalds. *Under this head* 13 *Lectures were given.*

3*rd Division.*— Diseases connected with or dependent upon perverted nutrition. Tumors. Malignant Diseases. Scrofula. *Under this head three Lectures were given.*

4*th Division.*—Diseases and Injuries of particular parts and Regions. Diseases of bones. Fracture. *Mode of union.* Fractures of particular bones. Diseases of Joints. Dislocations. Diseases and Injuries of Blood Vessels, of Lymphatics and Nerves; affections of Muscles, Tendons and Bursæ. Surgical diseases of the Skin. Injuries of the Head. Diseases and Injuries of the Eye and lachrymal apparatus, of the Ear and Nose. Diseases and injuries about the mouth and throat; and of the Spine. Injuries of the Chest and Abdomen. Hernia. *Anatomy of Inguinal Hernia.* Femoral Hernia. *Anatomy of Femoral Hernia.* Affections of the Genital and Urinary Organs. Diseases of the Female Breast. Diseases about the Rectum and Anus. *Under this head* 42 *Lectures were given.*

(Signed) J. Peet.
Professor of Surgery.

APPENDIX (G).

Return of Diseases treated in the Clinical Surgical Ward of the Jamsetjee Jejeebhoy Hospital, from the 1st July 1848, to 15th April 1849.

Names of Diseases.			Number Admitted.	Number Discharged.	Died.	Remarks.
Fractures	Simple	Forearm	2	2	0	
		Leg	4	4	0	
		Thigh	5	5	0	
		Skull	3	0	3	All these were Fractures with Depression and extensive injury of the Brain.
		Clavicle	1	1	0	
		Fingers	1	1	0	
	Compound	Forearm	1	0	1	Death from Tetanus
		Arm	1	1	0	
		Leg	6	3	3	One of these cases terminated fatally after amputation performed on admission, another from rapidly spreading Gangrene and the third, an old debilitated man, sunk under Hectic
		Finger and Toes	5	4	1	Death from Tetanus
Dislocations and Sprains	Dislocation of Shoulder-Joint		2	2	0	
	Subluxation of Ankle		3	3	0	
Wounds and Contusions	Upper Extremity		6	6	0	
	Lower		12	10	2	Both deaths from rapidly spreading Gangrene and debility
	Head and Neck		13	12	1	Death from Tetanus
	Trunk		2	2	0	
Ulcers	Scorbutic		9	9	0	
	Purulent		1	1	0	
	Indolent		1	1	0	
	Sloughing		1	1	0	
	Irritable		2	2	0	

Return of Diseases treated in the Clinical Surgical Ward.—Continued.

Names of Diseases		Number Admitted.	Number Discharged.	Died.	Diseases.
Abscess	Acute	12	11	1	
	Chronic	4	4	0	
Diseases of Bones	Caries	3	3	0	
Diseases of Urinary Organs	Stricture Urethræ	2	2	0	
	Calculus Vesicæ	2	1	1	The fatal case occurred in a child 4 years of age,—and death was caused by convulsions 36 hours after the operation.
Syphilitic Diseases	Primary Syphilis	8	8	0	
	Secondary	2	2	0	
	Gonorrhœa	3	3	0	
Aneurism of Carotid Artery		1	0	1	The tumour occupied the whole left side of neck, sufficient room not being left for ligature of the vessel.
Dracunculus		3	3	0	
Encysted Tumour		1	1	0	
Fibro-Cartilaginous Tumour of Jaw		1	1	0	The greater part of the upper maxillary bone removed.
Fistula in Ano		2	2	0	
Fungous Growth from Testicle		2	2	0	
Gangrene of the Scrotum		1	1	0	
Hydrophobia		2	0	2	
Polypus Nasi		1	1	0	
Scirrhus of Glands of Neck		2	2	0	The disease was too far advanced *for removal.*
Strangulated Inguinal Hernia		3	1	2	Two cases were operated upon; the remaining case was moribund when admitted.
Tetanus		3	1	2	
Total Treated		139	119	20	

(Signed) J. Pett,
Professor of Surgery.

APPENDIX (H).

The capital operations performed in the presence of the Students since 1st January 1848, have been as follows:—

Amputation of Thigh	3
,, Leg	6
,, Arm	2
Lateral operation of Lithotomy	3
Strangulated Inguinal Hernia	3
Removal of greater part of upper Jaw	1

The minor operations have been numerous, and have consisted of the removal of fingers and toes, tumors, the operations for Hydrocele, Fistula in ano, Hare-lip, &c., &c.

(Signed) J. PETT,
Professor of Surgery.

APPENDIX (I).

NOTIFICATION.

GRANT MEDICAL COLLEGE.

The following Scholarships will be open for competition to the Students of the College, at the close of the Session 1848-49, viz. in month of April, 1849.

I.

To the Third Year Students.

A CARNAC Scholarship of Rupees 20, monthly, for the greatest proficiency in the *Principles and Practice of Medicine and Surgery.*

A FARISH Scholarship of Rupees 15, monthly, for the second degree of proficiency in *the Principles and Practice of Medicine and Surgery.*

An ANDERSON Scholarship of Rupees 20, monthly, for the greatest proficiency in *Anatomy and Physiology.*

A CARNAC Scholarship of Rupees 20, monthly, for the greatest proficiency in *Materia Medica and Practical Pharmacy.*

II.

To the Second and First Year Students.

An ANDERSON Scholarship of Rupees 20, monthly, for the greatest proficiency in *Anatomy and Chemistry.*

A FARISH Scholarship of Rupees 15, monthly, for the greatest proficiency in *Anatomy.*

An ANDERSON Scholarship of Rupees 15, monthly, for the greatest proficiency in *Chemistry both Theoretical and Practical.*

III.

To the First Year Students.

A FARISH Scholarship of Rupees 10, monthly, for the greatest proficiency in the subjects of their study during the Session

CONDITIONS OF COMPETITION APPLICABLE TO ALL THE SCHOLARSHIPS.

Competition for the Scholarships is open both to Free and Stipendiary Students.

The Scholarships will be held for a period of one year

A minimum standard of proficiency will be fixed on, and should this standard not be exceeded, the Scholarships will not be awarded

In the event of a Student being the successful competitor for more than one Scholarship, he shall, in addition to the award of one Scholarship, receive some honorary mark of distinction, but the second Scholarship shall pass down to the proficient in the next degree.

The presence of the Students in the College and Hospital will be ascertained by Roll-call *at least* four times daily throughout the Session, and those Students who, during the Session, have been absent from more than 15 Roll-calls, exclusive of absence on recognized holidays, from sickness duly certified, and leave granted on unavoidable grounds, will not be permitted to compete for these Scholarships.

Those Students whose English Exercises, written during the Session, shew a marked want of attention to improvement in composition, will also be debarred from competing for these Scholarships

Should the written exercises required as part of the examination for the Scholarships, shew a marked want of attention to improvement in English composition, the writer will be held disqualified for a Scholarship, whatever his qualifications in other respects may be

The successful competitors will be required to shew, by the result of the General Examination at the close of the Session, that they have not neglected any of the branches of study with which they may have been engaged during the Session: deficiency in this respect will disqualify for the Scholarships.

(Signed) C. MORRHEAD,
Superintendent Grant Medical College

By order of the Board of Education,
HENRY J. CARTER,
Officiating Secretary.

Bombay, 25th July 1848

APPENDIX (J.)

GRANT MEDICAL COLLEGE.

The Annual Examination of the Students of the Grant Medical College, will commence on Thursday 22nd March, and be conducted in the following manner :

Thursday, 22*nd*.—Viva voce examination in Anatomy.

Friday, 23*rd*.—Questions in Anatomy will be proposed to which written answers will be returned.

Saturday, 24*th*.—Examination in Practical Anatomy.

Monday, 26*th*.—Viva voce examination in Physiology.

Tuesday, 27*th*.—Questions in Physiology will be proposed to which written answers will be returned.

Wednesday, 28*th*.—Junior Students. Viva voce examination in Chemistry. Senior Students. Questions in the Practice of Medicine will be proposed to which written answers will be returned.

Thursday, 29*th*.—Junior Students. Questions in Chemistry will be proposed to which written answers will be returned.

Senior Students. Questions in Surgery will be proposed to which written answers will be returned.

Friday, 30*th*.—Examination in Practical Chemistry.

Saturday, 31*st*.—Viva voce examination in the Practice of Medicine.

Monday, *April*, 2*nd*.—Viva voce examination in Surgery.

Tuesday, 3*rd*.—Viva voce examination in Materia Medica.

Wednesday, 4*th*.—Questions in Materia Medica will be proposed to which written answers will be returned.

Thursday, 5*th*.—Examination in Practical Pharmacy, in compounding medicines, and in the application of bandages.

These Examinations are held with the view of awarding the *Carnac*, *Farish* and *Anderson* Scholarships and other prizes ; and also of classifying the Students, and testing the progress made by them during the past Session.

The examinations will commence on each day at 11 A. M. ; and your attendance will be very acceptable to the Officers of the Institution.

C. Morehead,

March 15*th*, 1849. *Supt. Grant Medical College*

APPENDIX (K.)

QUESTIONS ON ANATOMY.

Answered by the 3rd Year Students.

1. In a space bounded above by a line drawn transversely from one condyle of the Humerus to the other, below by a similar line drawn across the junction of the upper and middle thirds of the fore-arm, and limited laterally by the borders of the Ulna and Radius, describe the parts in the order they are met with and their relations to one another, commencing at the skin in the front of the fore arm, and terminating at the skin behind.

2. Describe the upper triangle of the neck, its boundaries, extent, and the parts contained in it, with particular reference to the Surgical Anatomy of the common and external Carotid arteries.

3. Give a brief and general account of the state of development of all the bones at the period of birth, commencing with the Vertebral column.

4. Trace the Glosso-pharyngeal nerve from its origin to its termination; give a general description of the Ganglia connected with it, and afterwards describe minutely, the course, communications, and relations of the Tympanic nerve.

QUESTIONS ON ANATOMY.

Answered by the 2nd and 1st Year Students.

1. Describe the articulation of the Occipital bone with the Atlas and name the ligaments which are connected to the former bone and to the two upper Vertebræ.

2. Name the muscles which are attached to the lower jaw; describe the origin, insertion, size, and relations of the external Pterygoid muscle.

3. Enumerate the branches of the external Carotid artery, and describe the Lingual artery.

4. How could the Scaphoid and Trapezoid bones of the left side be distinguished from the same bones of the opposite side?

Questions in Chemistry.

Answered by the 2nd and 1st Year Students.

1. Explain the Chemical relations of Chlorine to the other Elements, state the condition in which it naturally exists, describe the processes for its preparation, with the nature of the changes that occur in them, describe the properties of this element, and the uses to which it is applied.

2. State the conditions in which Arsenic is found naturally, enumerate its compounds, and describe the best methods for distinguishing Arsenious Acid and Orpiment from all other substances.

3. Explain the changes that occur in the preparation of a Spirituous liquor and of Vinegar from toddy.

4. What is the nature of the changes that occur in the generating cell of a Voltaic circle, and of those also which take place in the decomposing cell.

Questions in Physiology.

Answered by the 3rd Year Students.

1. Name all the ultimate Elements which result from the decomposition of the structures of the animal body during life and mention the channels by which, and all the combinations in which, they are respectively separated from the blood and thrown out of the system.

2. Omitting the function of reproduction, mention all the organic functions in which nervous influence is operative and explain the kind of nervous influence and how it is exercised in each instance.

3. In what respects does the heart of a *Molluscous* Animal, of a Fish, and of a Reptile, respectfively differ from the human heart.

4. If three or four fibres of striated muscular fibre be mechanically irritated, what will be the effect on these fibres and what on the fibres adjacent ? If three or four fibres of non-striated muscular fibre be mechanically irritated, what will be the effect on these fibres and what on the fibres adjacent to them ?

Questions in Physiology.

Answered by 2nd Year Students.

1. What do you understand by animal heat and explain how it is generated ?

2. Describe the appearance of the red Corpuscles of the human

blood, mention their average size, their proportion to the other constituents of the blood, and the purpose which they are believed to serve in the animal Economy.

3 State the difference between the function of an afferent and efferent nervous fibre.

Questions in Practice of Physic.

Answered by 3rd Year Students.

1. Name those common diseases of the Chest, which, in some of their stages, are attended by increased dulness on percussion. Then state in regard to each of these diseases, the course of the Pathological changes from their commencement to that state which causes the dull sound on percussion. Dulness on percussion being common to all, mention in regard to each of these diseases, the diagnostic symptoms and signs which aid us in distinguishing them respectively from each other.

2. State generally the symptoms of Remittent Fever, then mention its causes predisposing and exciting. Explain the several ways in which life may be endangered by it, and state the general indications of cure which ought to be kept in mind in the treatment.

3. Name the principal Inflammatory diseases of the region of the Abdomen; state, in regard to each, the organ and the tissue which is the subject of inflammation, and in regard to each the common result of the inflammation in unfavorable cases; that is, in cases in which the termination has not been by resolution.

Questions on Surgery.

Answered by the 3rd Year Students.

1. State the chief differences between Gun-shot and other wounds; how could you ascertain whether a ball or other foreign body is lodged in a part; and in the event of its being lodged, what principles would guide you in regard to the propriety of making an attempt to extract it.

2. When an artery of moderate size is divided, explain the manner in which nature will sometimes succeed in bringing about a permanent cessation of the bleeding. Should the artery be of considerable size, mention the different methods which have been, and still are, adopted for the suppression of the bleeding, and state those which as a general rule you would prefer, giving your reasons for such preference; and in conclusion, describe minutely the changes that occur after the application of a ligature until its final removal.

3. When a person falls from a height alighting upon his feet, mention the injuries most likely to be produced.

4. Suppose a case where there is a swelling in the Popliteal space, state how you would decide whether it is a fatty tumour, an enlarged gland, or an aneurism. Give an account of the treatment of Popliteal aneurism, and state the principles upon which the treatment is founded.

APPENDIX (L).

Answers to the Questions on Anatomy, Chemistry, Physiology and Practice of Medicine.

ANATOMY.

1*st*. In a space bounded above by a line drawn transversely from one condyle of the Humerus to the other, and below by a similar line drawn across the junction of the upper and middle thirds of the fore arm and limited laterally by the borders of the Radius and Ulna, the parts met with are as follows :

1st. The skin, which in this situation is comparatively thin and delicate and marked above by a depression midway between the condyles, corresponding to the bend of the Elbow. In the flexed position of the Fore-arm, the bulging forwards of the tendon of the Biceps is indicated by a corresponding projection of the skin in this part. Below the skin, is the Sub-cutaneous Areolar tissue, containing in its areolæ some adipose tissue and minute blood-vessels and nervous twigs passing to the skin. Below the subcutaneous areolar tissue, is the superficial fascia of the Fore-arm, which is here very thin and intimately blended with the subcutaneous areolar tissue. Underneath the Superficial fascia are observed some of the cutaneous branches of the Internal and External Cutaneous nerves. The subcutaneous veins are also exposed to view. On the outer side we meet with the trunk of the Radial cutaneous vein, and on the inner side the anterior Ulnar vein joined higher up by the posterior Ulnar. Midway between them and smaller in size is the trunk of the Median Vein, and other smaller and unnamed venous trunks are observed to lie between and to open into these main trunks. The Median Vein divides at the upper part of the space into two branches ; one, Median-Basilic—turning upwards and inwards joins the Basilic Vein, the other—Median Cephalic—directed upwards and outwards terminates in the Cephalic Vein, and a branch sinks beneath the muscles to be connected with the deep veins. The Median Basilic Vein passes in front of the Brachial Artery separated from it by the Apo-

neurotic expansion given by the Biceps Muscle. The anterior cutaneous branches of the Internal Cutaneous nerve are generally seen crossing beneath the Median Basilic Vein, but they sometimes pass over the vein. A branch of the Musculo-Cutaneous nerve crosses beneath the Median Cephalic Vein, and the external Cutaneous branch of the Musculo-Spiral nerve is seen in contact with the Cephalic Vein at the outer border of the Forearm. These nerves as well as the veins are observed to rest on a strong fascia binding down the muscles of the fore-arm. On removing this fascia it is seen strengthened by a fibrous expansion given to it by the tendon of the Biceps Muscle. The fascia is attached on each side to the condyles and lateral ligaments of the Elbow Joint, as well as to the common tendinous origin of the Muscles at the inner and anterior part of the fore-arm.

The parts further exposed to view are the following muscles. Proceeding from without inwards we notice the Supinator Radii Longus, Pronator Radii Teres, Flexor Carpi Radialis, Palmaris Longus and Flexor Carpi Ulnaris, their upper portions. Bounded by the Supinator Longus on the outer side and the Pronator Radii Teres on the inner, we observe the lower termination of the Brachial Artery resting on the Brachialis Anticus Muscle to the inner side of the tendon of the Biceps, its semilunar fibrous expansion being stretched in front of the Artery and directed downwards and to the inner side. From the Brachial Artery, opposite the neck of the Radius arise the Radial and Ulnar Arteries its terminating trunks. To the inner side of the Brachial Artery lies the Median Nerve, dipping downwards and somewhat backwards between the heads of the Pronator Radii Teres. To the outer side of the Artery are branches of the Musculo Spiral Nerve, here lying between the Brachialis Anticus and Supinator Longus Muscles.

The Radial Artery is observed to be comparatively superficial and to follow the direction of the Parent Vessel accompanied by Venæ Comites, and over-lapped by the edge of the Supinator Longus muscle, which must be turned outwards to expose the vessels. They are separated from the Supinator Brevis behind by some areolar and adipose tissue and branches of the Musculo-Spiral Nerve.

Only a small part of the Ulnar Artery is seen, as it passes soon after its origin beneath the flexor muscles attached to the inner condyle. It is separated from the Median Nerve by the outer head of the Pronator Teres. On removing the muscles now examined, the

Flexor Sublimis is exposed with the Extensor Carpi Radialis Longior on the outer side. The Muscular branches of the Median Nerve are also seen, as also the Ulnar Artery and its Venæ Comites resting on the Flexor Profundus. On the outer side lies the recurrent branch of the Radial Artery covered by areolar and adipose tissue, extending upwards between the Supinator Longus and Brachialis Anticus, and furnishing branches to the neighbouring muscles. On the inner side the recurrent branches of the Ulnar, anterior and posterior, are seen frequently arising by a common trunk. Lower down we notice the commencement of the Flexor Longus Pollicis and the Flexor Profundus, the origin of the latter from the Coronoid process embracing the insertion of the Brachialis Anticus into the same process. Overlapped by the contiguous margins of the two Flexor muscles, and resting on the interosseous ligament are the interosseous artery and veins and the interosseous Nerve, the artery a branch of the common interosseous of the Ulnar, and the nerve an offset from the Median. At the inner side of the space, we observe the Ulnar Nerve resting on the Flexor Profundus and under cover of the Flexor Carpi Ulnaris. At the upper part we see the fleshy fibres of the Biceps terminating in a tendon which is observed to twist upon itself and to be applied by a flat surface to the posterior part of the tuberosity, of the Radius, a Synovial bursa being interposed between the tendon and tubercle. The Supinator Radii Brevis surrounds the Radius, and is notched for the insertion of the tendon of the Biceps. The insertion of the Brachialis Anticus into the Coronoid process is also exposed to view. We next come to the ligaments of the Elbow-Joint, and then to the bones themselves. We observe the Ligamentum Teres extending from the coronoid process of the Ulna downwards and outwards to a little below the tubercle of the Radius, and part of the interosseous ligament is seen commencing here, its fibres being directed downwards and inwards.

Proceeding still backwards, we see the posterior interosseous Artery and Nerve, the latter a branch of the Musculo-Spiral, which reaches the back part of the Fore-arm after piercing the Supinator Brevis. The parts that next come into view are the Extensor Ossis Metacarpi Pollicis, Extensor Digitorum Communis, Extensor Carpi Ulnaris, Extensor Minimi Digiti, the posterior interosseous recurrent Artery, the strong fascia at the back of the Fore-arm, the posterior cutaneous branches of the External and Internal Cutaneous Nerves, some superficial veins, subcutaneous areolar tissue, and lastly the integument.

2nd. The upper triangle of the neck is that triangular space at the side and front part of the neck, which is bounded by the posterior belly of the Digastric, the Sterno-mastoid and Anterior Belly of the Omo-Hyoid Muscle. Its base formed by the Digastric Muscle is directed upwards, its apex downwards. The following parts are contained within it. Proceeding from before backwards we meet with the skin, the superficial fascia, superficial Cervical Nerves, Platysma Myoides, Cutaneous branches of the Cervical Plexus, the Anterior Jugular Vein, and superior and middle Thyroid Veins. We next come to the deep Cervical fascia, the sheath of the common Carotid Artery, and higher up that of the Internal and External Carotid. Lying on the sheath of the Common Carotid Artery we see the Descendens Noni Nerve directed from without inwards, and forming anastomotic loops with branches of some of the Cervical Nerves. We also see the following branches of the External Carotid in this space; Superior Thyroid, Lingual, Facial, Occipital and Posterior Auricular Arteries. The Internal Jugular Vein and the Pneumo-Gastric Nerve are placed in the same sheath as the common Carotid, the Vein to its outer side and the nerve between and behind them. Higher up above the level of the upper margin of the Thyroid Cartilage, at which the common Carotid divides into the internal and external Carotids, the Internal Jugular Vein and Par Vagum are in close relation with the Internal Carotid Artery. The Hypo-Glossal nerve is seen at the upper part of the triangle turning below the Digastric muscle and behind the Occipital Artery over both Carotids in its course to the tongue. While crossing the Occipital Artery, its gives off the Descendens Noni Nerve. Behind the sheath of the Arteries are branches of the Sympathetic and of the anterior divisions of the Cervical nerves. Still more posteriorly parts of the Longus Colli and Scaleni Muscles, and lastly the Vertebral column. The vessels placed in the space are, it is thus seen, covered by the skin, superficial fascia, Platysma Myoides and the deep Cervical fascia, and are therefore more superficial and more readily accessible than the other parts of the vessels which are deeply placed.

The Anterior Jugular and Thyroid Veins are some times observed to form a plexus in front of the vessels. The Descendens Noni is also sometimes known to lie within the Sheath.

3rd. At the time of birth the Vertebral column is in great part ossified. Each Vertebra with the exceptions to be mentioned, consists of two ossific pieces, one anterior in the situation of the body, and two lateral pieces.

The Axis consists of four pieces, two anterior, situated one above the other, and one on each side.

The Sacrum. In addition to the ossific points common to it with the Vertebræ generally, three more ossific points on each side are observed, one just above the 1st Anterior Sacral foramen, and the other two between the several foramina. The Vertebræ, by the consolidation of which it is formed, are not united to one another by bony matter.

The Cranium. The greater part of the Cranium is ossified. There is absence of bony matter mostly in the situation of the Anterior and Posterior fontanelles. The *occipital* bone consists of 4 parts : 1st, Posterior or Proral part ; 2nd, Condyloid pieces one on each side, and 3rd, an Anterior or Basilar portion. The bone is in great part ossified.

The Sphenoid Bone. The greater part is ossified. It consists of *three* pieces, 1st. Small wings and body and united into one, forming the Spheno-orbital portion. 2nd. Great wings and Pterygoid plates of the same side. 3rd. The same parts of the opposite side. Frequently there are separate ossific points for the Sphenoidal crest and spongy bones.

The *Ethmoid.* The lateral masses are in great part ossified. It consists of *two* pieces.

The *Temporal* bone. Its greater portion is ossified ; it consists of *three* pieces. 1st. The Squamous and Zygomatic portions united into one piece. 2nd. The Petrous and Mastoid united into a 2nd piece, and 3rd the Tympanic piece. The *frontal* bone. Greater part ossified and consists of two pieces.

The *Parietal* bone. Its greater part is ossified and it consists of one piece.

Lower Jaw.—Ossified, consists of *two* pieces. The superior *Maxillary* bones, the *Malar*, *Nasal Lachrymal*, *Palate, and Vomer*, consist of a single piece each.

Long bones. The Shaft is for the most part ossified. There is no ossific point in the extremities of long bones of the upper extremity. There is one for the lower extremity of the Femur. The Carpus is not ossified. The Meta-Carpus is so in great part. The Tarsus ossified in great part.

The Os innominatum. It is ossified to a considerable extent. It consists of *three* pieces. 1. Forming a great part of the *Ilium* and

part of the Cotyloid Cavity. 2. Part of Cotyloid Notch and Ischium 3. Part of the Cotyloid Notch and Pubes. The *Sternum*. A great part ossified consists of one piece. *Scapula* consists of one piece.
Clavicle. do.

4th. The Glosso-Pharyngeal Nerve is, as its name implies, intended for distribution to the Tongue and Pharynx. It arises by a number of funiculi from the Groove in front of the Restiform body, between it and the Olivary body and above the roots of the Pneumo-Gastric Nerve. Its deep origin is traced to one of the tubercles of grey matter observed in the floor of the fourth Ventricle of the Brain. From its origin, the Nerve is directed outwards over the lobe of the cerebellum termed the Flocculus to the Foramen Lacerum Jugulare. In this foramen it lies anterior to the Pneumo-Gastric and Spinal Accessary Nerves, which are separated from it by a membranous partition, and these by a bony Lamella or membranous partition from the Lateral Sinus behind, which here becomes continuous with the Internal Jugular Vein. In passing through the foramen, the Nerve is contained in a groove or canal in the lower part of the Petrous portion of the temporal bone, and here it has in connection with it two ganglia, named the Jugular and Petrous ganglion. After its exit in the Neck, it is deeply placed but becomes less so towards its termination.

At the base of the skull it is placed between the internal Carotid Artery and the Jugular vein. It is then directed over the Carotid Artery, as it passes towards the Tongue beneath the Styloid Process and the Muscles arising from it to the lower margin of the Stylo-pharyngeus. Thus far the direction of the Nerve is downwards with an inclination forwards, but here changing its course it crosses inwards over the Carotid Artery to the Tongue, forming an Arch on the side of the Neck. In this situation it is placed on the Stylo-pharyngeus and the middle constrictor Muscles, above the Superior Laryngeal branch of the Pneumo-Gastric, and near the tongue it is situated beneath the Hyo-Glossus, and terminates in offsets to the Pharynx, Tonsils and Tongue.

Ganglia.

1st. Jugular Ganglion. It is placed at the upper part of the Groove. Its length is from half line to one line, breadth from half a line to three-quarters of a line. Its situation is over the external part of the Nerve, and is connected with a portion only of the fibres of the Nerve.

2d. Petrous Ganglion, called also Ganglion of Andersh,* is situated in the lower part of the Petrous portion of the Temporal Bone. It is about three lines in length.

From the Petrous Ganglion, the Tympanic Nerve arises, also filaments to the Par Vagum and Sympathetic Nerve.

Tympanic branch (Nerve of Jacobson). Arising from the Petrous Ganglion of the Glosso-pharyngeal, it is directed to a small foramen situated in the plate of bone lying between the commencement of the Carotid Canal and the Jugular Fossa. Through this foramen it passes into the Tympanum at its inner wall where it joins an offset of the Sympathetic, and spreads out into a plexus called the Tympanic plexus, from which filaments are distributed to the membrane, to the Eustachian tube, and one to the Fenestra Rotunda, and another to the Fenestra Ovalis.

The Nerve then gives three connecting branches, one to the Carotid Plexus, another to the large superficial Petrosal, and a third is directed beneath the canal for the Tensor Tympani Muscle to become the small superficial Petrosal, which is then guided by a special aperture in the temporal and Sphenoid bones to the Otic Ganglion. There are three grooves for these branches on the Promontory. A small offset is sent from the small superficial Petrosal to the Facial, as it passes by the Gangliform enlargement.

BRAWOO DAJEE.

CHEMISTRY.

ANSWERS.

1. The Chemical relations of Chlorine to the other elements are that it is a salt radicle; as it combines with metals to form haloid salts, and it widely differs from the Acids which combine with metallic and earthy bases to form salts. It closely *resembles* in its characters Bromine, Iodine, Fluorine, Cyanogen, &c.

The following are the conditions in which Chlorine naturally exists. It is found generally in the Seawater forming Chlorides of Metals, such as Chloride of Sodium, Calcium, Magnesium, &c. but chiefly it is in combination with Sodium forming common Salt or Rock salt, and from which it is obtained for practical purposes.

There are two processes for the preparation of this gas. One consists in heating together Chloride of Sodium, Sulphuric Acid and

* Cruveilhier.

Peroxide of Manganese; whilst the other consists in heating together Hydrochloric Acid and Peroxide of Manganese. The first may be effected by taking two parts of Sulphuric Acid, one of Peroxide of Manganese, and one of Chloride of Sodium. And then the Materials may be placed in a Retort or Flask and heat applied. Generally there is no need of Heat as the action is set up without it. When the action ensues the Chloride of Sodium is decomposed, and the Sodium is oxidized at the expense of the Peroxide of Manganese and forms Soda which combines with one of the two of Sulphuric Acid to form Sulphate of Soda. Whilst the remaining one of Sulphuric Acid combines with the Protoxide of Manganese, which was reduced to this state by the Sodium taking one *of* Oxygen from it; and forms Sulphate of Manganese, whilst the Chlorine of the Chloride of Sodium is set free which may be collected, not over water or Mercury, as the former absorbs the gas in a large quantity, whilst the latter combines with it to form Chloride of the Metal, but by displacement.

The changes that take place during this action may be thus represented.

$$NaCl, MnO^{2} \& 2SO^{8} = Cl, MnOSO^{8} \& NaOSO^{6}.$$

The second process is carried on by heating two parts of Hydrochloric Acid, with one of Peroxide of Manganese. In this case the Hydrochloric Acid, is decomposed; its two of Chlorine are transferred to the Manganese which is also decomposed. The Oxygen from the Peroxide of Manganese combines with the Hydrogen of the Hydrochloric Acid and forms water, whilst the Chlorine and Maganese form Bichloride of Manganese. This Bichloride is decomposed when the application of heat is continued, into Chlorine, which is liberated and Protochloride of Manganese.

The changes in Symbolic Language may be represented in the following manner.

$$2HCl \& MnO^{2} = 2HO, MnCl \& Cl$$

These are the processes by which Chlorine gas is obtained. It is prepared by the latter process when required in small quantities.

The Properties of Chlorine. It is a gas of a green colour, whence its name is derived, and of a suffocating odour. When a lighted taper is introduced into a jar of Chlorine it is instantly extinguished. The Metals Antimony and Arsenic, when powdered and thrown into a

jar of this gas burn and produce beautiful scintillations. Phosphorus also takes fire in this gas. If a paper dipped in oil of Turpentine be introduced into Chlorine, it burns. Also Brass and Tin foils burn in it. Its specific Gravity is 2,470 and can be condensed to the liquid state by a pressure of about four Atmospheres.

Water absorbs from about 100 to 150 cubic inches of the gas. Chlorine combines with Alkaline earths and forms Chlorides of the earths, such as Chloride of lime, &c. Chlorine is an oxidizing agent, hence its abundant use in the preparations of many substances Chlorine when in the nascent state dissolves Gold and Platinum. Chlorine water when exposed to light is decomposed, hydrochloric Acid is formed and oxygen is given off. When it is suddenly brought in contact with Hydrogen gas, it combines with an explosion to form Muriatic Acid; but when slowly brought in contact, it makes no noise. Chlorine gives with Nitrate of Silver a white curdy Precipitate of Chloride of Silver which blackens on exposure to air: it is insoluble in Nitric Acid but soluble in Ammonia.

Chlorine is employed in the arts for decolourizing or bleaching vegetable as well as animal substances.

Its further application is in decomposing many noxious and poisonous gases mixed with the Atmosphere, such as Miasmata and other like poisons. And also Sulphuretted Hydrogen, Ammonia, &c.

2. The conditions in which Arsenic is naturally found, are the following: It is found in combination with Nickel, Cobalt and very rarely Chromium forming Arsenurets of the Metals. It also exists in the condition of Orpiment constituting its Tersulphuret. It is also found in the Metallic state.

The compounds of Arsenic with Oxygen are two, with Hydrogen one, and with Sulphur three. They are named as follows:

Arsenic and Oxygen.

Arsenious Acid ..... AsO^3

Arsenic Acid ..... AsO^5

Arsenic and Hydrogen.

Arseniuretted Hydrogen ..... AsH^3

Arsenic and Sulphur.

Bisulphuret of Arsenic or Realgar ..... AsS^2

Tersulphuret of Arsenic or Orpiment ..... AsS^3

Pentasulphuret of Arsenic ..... AsS^5

The following are the best methods for distinguishing Arsenious Acid.

If Arsenious Acid be heated in a wide tube, it is volatilized and sublimed in the cooler part of the tube in the same form. If it be heated with carbon in a narrow tube, Metallic Arsenic of a steel grey colour is obtained. Then, if to a solution of Arsenious Acid, made by boiling it in water, Ammoniaco Sulphate of Copper be added, a greenish precipitate of Arsenite of copper is thrown down. This is called Scheele's Green, as he was the person who first investigated its nature. In the same manner if Ammoniaco-Nitrate of Silver be added, to it, brilliant Yellow Arsenite of Silver is precipitated. In these tests there should not be an excess of Ammonia, or in other words, the solutions should not be alkaline, as the alkali Ammonia dissolves the precipitates. Further, if current of Sulphurretted Hydrogen gas be passed through a solution of Arsenious Acid, Tersulphuret of Arsenic of an orange yellow colour is obtained.

The following two processes are the most satisfactory means of distinguishing Arsenious Acid. They are named after their respective investigators, viz. Marsh and Reinch.

Reinch's process consists in boiling the solution of Arsenious Acid in Muriatic Acid with some copper chips. In this case Metallic Arnenic is deposited upon the copper chips. These chips may then be taken out and put in a tube and heated, by which the metal is oxidized by taking oxygen from the Air and forms Arsenious Acid, which is deposited like a ring in octohedral crystals. These then may be dissolved by boiling in distilled water, and then applying the above three liquid tests.

The Marsh's process is carried on in a special Apparatus termed Marsh's Apparatus. It consists of a tube resembling somewhat the letter U. At one of its limbs it has a bulb. Into the bulb the suspected Liquor and Sulphuric Acid are put, and a piece of Zinc is suspended in it. The zinc decomposes the water of the Sulphuric Acid, combines with its oxygen to form oxide of zinc, which with the Sulphuric Acid forms Sulphate of the oxide of zinc, whilst the Hydrogen is set fire. The nascent Hydrogen thus set free, decomposes the Arsenious Acid, and combines with the Arsenic in the proportion of one of the latter to three of the former to form Arsenuretted Hydrogen gas, which may be recognised by its giving a Garlic odour, and producing a bluish white flame when lighted. This gas may be decomposed into metallic Arsenic Acid and Hydrogen gas. When allowed to pass through a red hot tube, the metallic Arsenic is deposited of a steel grey colour, a little beyond the point at which

the tube is heated, and this serves to recognise it from Antimoniretted Hydrogen. Then the portion of the tube containing this brilliant Metallic deposit, may be filed and introduced into a wide tube. On then applying heat to the tube, the Arsenic is oxidized and forms Arsenious Acid as in the former case, and this afterwards may be treated in the same manner as has been mentioned in the former process.

However, it must be observed in these cases that the materials used do not contain any arsenic as the substances are liable to be mingled with it during the various processes they are to undergo in their preparation and preservation. These errors should then be carefully avoided and guarded against, or else the processes will mislead.

Orpiment may be distinguished from all other substances in this way. First, it is capable of being volatilized and sublimed when heated; and secondly, if it be heated with Blackflux (Carbonate of Potash and Carbon), Metallic Arsenic is obtained. Thus the Sulphur combines with the Potassium and forms Sulphuret of Potassium, whilst the oxygen of the Potash from the Blackflux combines with the carbon and forms Carbonic Acid and Carbonic Oxide gases, which are given off and Metallic Arsenic is left behind.

The changes that take place during this action may be thus represented in symbols:

$$AsS^{3} \& 3(KOCO^{2} + C) = 3KS, As, 3CO^{3} \& 3CO$$

3. The following changes occur in the preparation of a spirituous Liquor. When the fermentation of any Saccharine or amylacious substances is taking place through the agency of a ferment, Alcohol, Carbonic Acid and water are the results. Thus the ferment which is itself decomposing, induces decomposition in the substance with which it happens to be placed. A portion of the Carbon and a portion of the Oxygen from the Saccharine substance unite and form Carbonic Acid, whilst a portion of the Oxygen and Hydrogen unite and form water. And lastly, the remaining Carbon Hydrogen and Oxygen arrange themselves in such a manner as to form Alcohol.

The changes may be thus shown.

Sugar. Alcohol.

$$C^{24} H^{28} O^{28} = 4(O^{2} C^{4} H^{6}) \; 8CO^{2} \& 4HO.$$

In the preparation of Vinegar from Toddy, first the albumen which exists in the Toddy and which is a ferment sets up decomposition in

the Sugar of the Toddy. When its elements unite in the proportion to form Alcohol, which is then converted into a substance called Aldyhyd which is Alcohol minus two of Hydrogen. This latter takes two of Oxygen from the air and forms hydrated Acetic Acid.

And thus Vinegar is formed. The following is a representation of the changes that take place in symbols.

$$O\ C^{4}\ H^{6} = H^{2} \& H^{4}\ C^{4}\ O^{2}.$$

$$H^{4}\ C^{4}\ O^{2} \& 2\,O = O^{4}\ C^{4}\ H^{4} \text{ Acetic Acid.}$$

4. The changes that occur in the generating cell of a voltaic circle may be thus explained. The elements of a voltaic circle are two solids and one liquid. Then, if we take Hydrochloric Acid as the liquid and copper and zinc as the solid elements, then the Hydrogen will be given off at the surface of the copper whilst the Chlorine will combine with the zinc and form Chloride of Zinc.

The changes in the decomposing cell are that if we take for instance Iodide of Potassium, then the Iodine will be set free at the positive pole or Cathode, and the Potassium at the Negative pole or Anode.

SHAMRAO NARAYEN.

PHYSIOLOGY.

1. The ultimate elements which result from the decomposition of the structures of the animal body during life, are Carbon, Hydrogen, Oxygen, Nitrogen, Phosphorus, Sulphur, Sodium, Chlorine, and Magnesium.

The channels by which they are separated, and the forms in which they are separated are these :

Kidneys .....
- Urea ..... C. H. N.
- Uric Acid ..... C. H. N. O.
- Lactic Acid ..... C. H. O.
- Phosphate of Soda ..... P. Na. O.
- of Magnesia.. P. Mg. O.
- of Ammonia.. P. O. N. H.
- Chloride of Sodium ..... Cl. Na.
- Some other less important substances.

Copper has been detected in urine by Dr. O'Shanghnessy.

Skin	Water	H. O.
	Carbonic Acid	C. O.
	Lactic Acid	C. H. O.
	Saline Substances.	
Lungs	Carbonic Acid	C. O.
	Water	H. O.
	Volatile organic matters.	
Liver	Cholesterine	C. H.
	Fatty Acid	C. H.
	Colouring principle	
	Soda in combination with the Acid &c.	Na. O.
Intestinal Mucous glands.	Mucus	C. H. O. N.
Other intestinal glands	The nature of their secretions is not well understood.	
Sebaceous glands		C. H.

However all the water eliminated from the system, is not a product of the decomposition of the tissues, but the greater part of it is evidently from what is drunk and has only formed part of the blood, and not of the more solid tissues. Also, of all the Oxygen eliminated through the lungs and other parts, the greater portion is that introduced by respiration and brought to the tissues by the red corpuscles chiefly.

Of these excretory organs, the kidneys are especially instrumental in ridding the blood, of its Nitrogen; the liver, of Carbon and Hydrogen; and, the lungs and skin, of Carbon and Hydrogen also.

2. The organic functions in which nervous influence is operative, the kind of nervous influence and the mode in which it is influenced in each instance, are as follows:

Digestion. Here, the introduction of food into the mouth, its reduction by means of mastication, and its passage into the stomach by the process of deglutition, are all under nervous influence. The first and second parts above mentioned are performed through influence of the voluntary kind. Whenever an individual wishes it, he introduces food into his mouth by putting one set of muscles into action, and chews it by putting another set of muscles into action. However, in infants, before volition can take place, the nipple of the mother is introduced into their mouth, and it is grasped between the lips and sucked: and this has been done in infants born anencephalous. Hence this is evidently in them a reflex action. Deglutition

is in all an action of the reflex kind. The food having once got behind the anterior palatine arch, it will be swallowed in spite of the will. The act is performed by the bolus of food making an impression on the extremities of the fibres of the glosso-pharyngeal nerve, and these conveying the impression to the medulla oblongata, where a reflex motor impulse is generated and brought by efferent fibres through the par vagum and pharyngeal nerve to the constrictor muscles of the pharynx, which contract upon the food and urge it forwards. The casting off from the body of the useless remains of the food (added to the secretions of the intestinal canal and part of the bile), may also be included in the function of digestion and mentioned here, as, it also, is under nervous influence, and of the reflex kind. The presence of fæcal matter in the lower part of the intestinal canal makes an impression on the peripheral extremities of excito-motor fibres, which convey it to the spinal chord, and in respondence to it, a reflex motor impulse is sent from the chord to the abdominal muscles, whose contraction forces the sphincter ani to give way: and thus the process of defœcation, as it is called, takes place.

Respiration. Here the introduction of air into the lungs is effected through nervous influence. In this instance also, it is of the reflex kind. The presence of venous blood in the capillaries of those organs impresses the afferent extremities of the par vagum, which impression is conveyed to the medulla oblongata, whence a reflex motor impulse is sent through the phrenic and intercostal nerves to the diaphragm and intercostal muscles, which in obedience to it contract and lead to the expansion of the chest, which is followed by the entrance of air. These two are the only organic functions (besides that of Reproduction) in which nervous influence is absolutely necessary. There are other organic functions in which the nervous system exercises some influence; but as this influence is not necessary to them, I need not mention them here.

3. The human heart consists of four compartments, one auricle and one ventricle of the right side, and corresponding parts of the left side. The cavities of one side do not communicate with those of the other. The right side having no other relation with the left than that of its juxta-position for the saving of space and material, may be said to be a separate heart. Its function also, is different from that of the other. It is subservient to pulmonary circulation, while the left, to the systemic circulation. Now, the heart of a molluscous animal consists of two cavities, a ventricle and an auricle:

It is a systemic heart containing arterial blood, which, by the contraction of its ventricle, is sent to the different parts of the body and having supplied materials for its nutrition, &c. returns ; but before it gets to the heart, it goes through another set of capillaries—those of the gills of these animals : here it is exposed to the action of the air, contained in the medium in which these animals live, and being arterialized, is returned to the auricle of the heart—thence to the ventricle ; and then follows the same course again.

The Heart of a Fish also consists of two cavities, but is a pulmonary heart—placed at the commencement of pulmonary circulation and containing venous blood. The contraction of the ventricle sends the blood to the gills ; here it is exposed to the influence of the air in solution in the water ; and being aerated, goes directly to the systemic vessels and capillaries ; and having subserved the purposes of nutrition, &c. returns to the auricle of the heart. However, the blood circulating through the posterior half of the body of the Fish, gets into the portal system and the Liver, and there having served its purpose goes to be mixed with the blood circulating in the upper part.

The Heart of a Reptile again consists of three chambers, two auricles and one ventricle. One of the auricles receives venous blood, and the other arterial blood ; both pour it into the ventricle ; this forces it into an arterial trunk which immediately divides into two parts : one takes it to the lungs, the other to the different parts of the body for its nourishment. This latter returns to one of the auricles in venous state, and the other portion returns in an arterial state, and both mixing together in the ventricle follow the course above mentioned.

4° If three or four fibres of striated muscular tissue be mechanically irritated, they will contract, not all at the same time, but every other of them ; and the intermediate ones, not in a state of contraction, will assume a zig-zag direction so as to become of the same length as the others—the shortening of those in the state of real contraction will be owing to the approximation of the ends of the corpuscles composing the elementary fibre. But the adjacent fibres, which are not irritated, will not be affected.

When non striated muscular fibres are mechanically irritated, they also are thrown into contraction, but all of them at once and in a slow or tonic contraction, and this will be gradually extending from fibre to fibre, to those not irritated.

P. F. Gomez.

PRACTICE OF MEDICINE.

1. The diseases of the Chest that are attended by dulness on percussion in some of their stages are Pleuritis, Pneumonia, Phthisis, Pulmonary Apoplexy, Hydrothorax, and Pericarditis.

Pleuritis. This disease is inflammation of the Pleura, or the serous lining of the cavity of the chest. It is characterised by pain of a lancinating kind, in the part affected and more or less dyspnœa. The inflammation going on unchecked, leads to some of its results. Thus there may be effusion of serum, coagulable lymph, or puriform or seropuriform matter, which filling the cavity of the Pleura, leads to the dull sound on percussion of the chest. The dulness on percussion arising from this cause may be distinguished from that of other diseases, by the following signs and symptoms.

The affected side appears somewhat more prominent than the other. The intercostal spaces are less marked or quite effaced, or if the quantity of the matter contained in the sack be great, the soft parts contained in the intercostal spaces, may protrude a little beyond the ribs. The vibrations of the voice are not at all felt, or they may be weaker than those of the opposite or unaffected side. If the matter be contained in the left side of the chest, the Heart may be displaced and its sounds heard behind or even to the right side of the sternum. In this case also the spleen is displaced, and it can be felt below the margin of the left false ribs. If the effusion as a result of Pleuritis, be situated in the right side of the chest, there will be no displacement of the heart, but the liver will be depressed, and we will feel an indurated swelling, below the margin of the right false ribs. If we now apply the stethoscope to the affected side, we will find no sounds if at all we may hear Bronchial sounds in the dorsal region, near the spinal column, the lung being pressed backwards and inwards towards it. The dulness of Pleuritis varies with the position of the patient.

Pneumonia. This disease is inflammation of the parenchymatous structure of the lungs, including under this term, the cells, the intercellular areolar tissue, and the ultimate minute ramifications of the bronchi where they terminate in the cells.

This disease is divided into three stages according to the results of the inflammation. The dulness on percussion of the chest in this disease is found in the 2nd stage. The first stage consists in bloody engorgement or sanguineous congestion, which is the stage of inflam-

mation. If a piece of lung in this stage of Pneumonia, be examined after death, we find it to be red and filled with blood, and when put into water, to float over its surface, and if we make an incision, bloody, frothy serum exudes. If this stage be allowed to pass on unchecked, it leads to effusion of coagulable lymph and thus to solidification of the Lung. When the effusion has thus taken place, the air cells become blocked up and no air passes into them, which ultimately leads to the dulness on percussion. The signs and symptoms, distinguishing the dulness of Pneumonia from that of the other diseases, are the following:—There is more or less difficulty of breathing and cough. The expectoration is of tenacious mucous sputa, sometimes of a rusty red colour, which latter circumstance is taken by some pathologists as a pathognomonic sign of this disease. The intercostal spaces are well marked, but the ribs of the affected side are not raised in the act of inspiration, as on the other side. The dulness of Pneumonia is generally found, first, in the lower lobes of the lungs, and it does not vary with the position of the patient, as in *Pleuritis*. The vibrations of the voice are more marked than on the opposite side. There is no displacement of either the Heart or Spleen in case of the left lung being hepatised or of the Liver in the case of the right. But if the left lung be hepatised, the sounds of the heart are heard over a considerable surface of the left side of the chest. The dulness of Pneumonia is not slow in its progress, but becomes more and more marked as the disease advances.

If the Stethoscope be now applied over the dull surface of the chest, we may hear Bronchial respiration.

Phthisis Pulmonalis. The disease is the deposition of tubercles of cacoplastic lymph, in the substance of the lungs. It is sometimes a consequence of a low chronic inflammation occurring in the substance of the lung, in that diathesis of the body called Serophulous. Sometimes when the diathesis is well marked, the deposition of tubercles may not be preceded by inflammation. When a large number of these tubercles are deposited, they lead to the solidification of the lung, and thus to the dull sound on percussion. The dulness of this may, but with some difficulty, be distinguished from that arising from Pneumonia and other diseases.

The patient has slight chronic bronchitis. He becomes daily emaciated and the dulness comes on very slowly and never becomes so well marked, as in Pneumonia. As the disease generally attacks the upper lobes of the lung first, we find the dulness of the upper

part of the chest. The Physical sign under the Stethoscope in the part of the chest that is dull, is the bronchial respiration. While we find these signs in the affected lung, we find the presence of tubercular deposition in other parts of the body, which circumstance strengthens the supposition of the presence of tubercles in the lung. There is some difficulty of breathing but not so marked as either in Pleuritiis, Pneumonia, or Hydrothorax.

Pulmonary Apoplexy. Pulmonary hœmorrhage is the consequence of congestion or determination of blood in the capillaries of the lung.— When it is of a considerable extent, it leads to dulness on percussion of the Chest, but the dulness is generally circumscribed and is not so well marked as in the other diseases.

It is very difficult to distinguish the dulness arising from this cause from that of the other diseases. There may be under the Stethoscope mucous and subcrepitous rale from the air passing through the fluid blood or the serum of the coagulated blood. There is often accompanying Pulmonary Apoplexy, Hœmoptysis, which then becomes a strong proof of the presence of blood in the lungs. The history of the patient may probably aid us in the diagnosis.

Hydrothorax. This disease is the dropsy of the Pleura, and is a consequence of either determination of blood to or congestion of blood in the capillaries of the Pleura. The deranged circulation of blood in the capillaries leads to effusion of serum in the cavity of the membrane.

The signs and symptoms of this disease, after the effusion has taken place, resemble very closely those of the pleuritic effusion. As Hydrothorax occurs as a part of the general dropsy, the presence of dropsical swellings in other parts of the body lead to the belief of the effusion in the cavity of the Pleura being a dropsical one and not pleuritic.

The symptoms that preceded the effusion into the sac may also lead to the diagnosis of the disease. Thus the Pleuritic effusion is generally preceded by pain, whilst that of Hydrothorax is not.

Pericarditis. Pericarditis is inflammation of the serous covering of the Heart. This inflammation like all others, when left unchecked, leads to the effusion of serum, coagulable lymph or purulent matter more or less mixed with serum. When the effusion of one of the above mentioned substances takes place, the præcordial region becomes dull.

The dulness of this disease may be distinguished from that of the other diseases, in the following way.

It is confined to the præcordial region, and when the Stethoscope is placed over it, we may hear the vesicular murmur or some rale, in that part of the lung which overlaps the heart. As Pericarditis generally accompanies Rheumatic affections of the large joints, the presence of the latter may also throw some light on the diagnosis, of the dulness from Pericarditis. The general symptoms of Pericarditis that precede the dulness, may also aid us in the diagnosis.

Aneurism of the Arch of the Aorta and some malignant disease of the lungs, may lead to the dull sound on percussion, but these are very rare.—Pneumothorax is Pleuritic effusion with air in the cavity of the chest.

2nd. Remittent fever ushers in by shiverings. The patient feels chilly, although the external temperature of the body may not be reduced below the natural standard. The action of the vascular system becomes slightly depressed. This the cold stage of the fever, remaining for some time, is soon followed by the 2nd or the hot stage of the fever, characterized by increased heat of skin. The face becomes flushed, the conjunctivæ of the eye somewhat injected. The vascular system becomes excited. Thus there is frequency of pulse. The action of the heart is increased. All the other functions of the body are generally deranged. Thus the hot skin becomes dry and rough. The tongue is dry and coated with a fur. The patient feels thirsty, the appetite is impaired, the bowels become costive. There is often headache, vertigo and delirium. Sometimes the influence of the nervous system is defective in its action. Thus there is some loss of the action of the voluntary muscles and the patient feels weary. This stage is followed after a time, by an abatement or remission of all the symptoms. Thus there is but slight heat of skin, the pulse is slightly frequent. The skin is somewhat moist and it loses the roughness. The tongue becomes moist, the head symptoms also lessen in severity. There is in fact an improvement of all the symptoms but not a perfect cure. The stage of remission is again followed by that of exacerbation, and thus they continue for a length of time. Each period of exacerbation leaves the body in a debilitated condition. The debility increasing by the successive periods of excitement, at last the system becomes so much reduced, that all the symptoms assume the character of those of the Typhoid fever. Thus the pulse becomes feeble and frequent, and sometimes intermittent. The tongue dry and coated with a brown fur and tremulous. There are involuntary twitches of the muscles

of the limbs and subsultus tendinum. The patient has muttering delirium and passes his urine and fæces involuntarily in bed.

The predisposing causes of this disease are, debility from previous sickness, or defective food, breathing impure atmosphere, habitual residence in hot climates, exposure to cold and moist air. Whilst the exciting cause is the poison of malaria, which acting on the debilitated system brings about the disease.

The disease may terminate fatally either by coma or by asthenia, but the great danger to life in this disease, is its tendency to lead to inflammation of and determination of blood to the internal organs. Thus it may lead to inflammation of or determination of blood to the Brain, and then implicating the medulla may lead to death by coma. Death by asthenia is brought about by the exhausting influence of the inflammation of internal organs, such as the Intestines; and also by the debility caused by the recurrence of the exacerbations of the Fever itself.

The indications of cure in this disease are, 1st. To diminish the excitement of the vascular system. 2nd. To check the recurrence of the exacerbation by which we also prevent the tendency to inflammation of the internal organs; but when the inflammation is once excited, the indication is to check them by the ordinary means adopted for them in their Idiopathic state, bearing in mind, that they will not bear the same depletion that they would in their Idiopathic state, and lastly when there is a tendency to death, either in the way of asthenia or coma, to obviate the tendency. Thus in the first case, we should have recourse to stimulants, and to nourishing and digestible articles of food; and in the latter case, to remove the derangement of the circulation of blood that might have produced the coma, by means of blisters, leeches, &c.

3rd. The inflammatory diseases of the Region of the Abdomen are, Peritonitis — Hepatitis, Gastritis, Enteritis, Muco-enteritis, Dysentery, Nephritis, Splenitis.

Peritonitis is inflammation of the Peritonium, the serous covering of the abdomen.

There are two degrees of Peritonitis, viz., acute and chronic. The acute form may terminate by effusion of serum and coagulable lymph, which may either degenerate into pus, and become more or less mixed with serum, or, become organised and agglutinate together the different convolutions of the intestines and form adhesions between them and the abdominal parieties. The Chronic may lead

to the effusion of coagulable lymph which degenerating into pus and mixing more or less with serum, may fill the cavity of the Peritonium. There is another kind of Peritonitis, occurring in puerperal women, which leads to the formation of seropuriform matter in the sac.

Hepatitis, or inflammation of the liver, is also of two degrees, viz. acute and chronic. The acute inflammation leads to softening of the structure of the liver and also to the effusion of lymph, which degenerating into pus, forms abcesses in the structure of the organ. The Chronic inflammation leads to effusion of lymph which becomes organized and leads to hypertrophyof the areolar tissue, which pressing upon the lobular structure, brings about atrophy of the parts.

Gastritis is inflammation of the mucous membrane of the stomach. Acute Gastritis, as an Idiopathic disease, is very rare. It is generally produced by irritating substances taken into the stomach.

As a result of this inflammation, there may be softening of the membrane or ulceration of it. As a result of chronic gastritis, there takes place effusion of coagulable lymph in the submucous tissue, which becoming organized causes hypertrophy of the membrane.

Enteritis is inflammation of the muscular and serous coats of the intestines. As a result of this disease which is both acute and chronic, there may be softening of the muscular coat and the loss of its vital properties, and there is also effusion of coagulable lymph in the subserous tissue which causes its hypertrophy.

Muco-Enteritis, or the inflammation of the mucous membrane of the small Intestines, is both acute and chronic. The Acute may lead to effusion of serum, more or less tinged with blood, on the surface of the mucous membrane. It may also lead to the effusion of puriform matter over the free surface. Ulceration and softening of the mucous membrane may also result from this inflammation. The Chronic inflammation may give rise to ulceration of the membrane, or to hypertrophy of the submucous tissue by means of the effusion of coagulable lymph. The scrophulous inflammation of the mucous membrane of the Intestines gives rise to tubercular depositions in the submucous tissue.

Dysentery or Colitis, is the inflammation of the mucous membrane of the colon or large Intestines. There are two degrees of this inflammation, viz., Acute and Chronic. The Acute may give rise to effusion of serum tinged with blood—to ulceration of the mucous membrane and to softening of it. The Chronic may give rise to thickening of the mucous membrane by the effusion of coagulable

lymph, which may either be granular or flaky, on the surface of the mucous membrane. It may also lead to ulceration of the membrane.

Nephritis is the inflammation of the kidneys. Under this term are included four distinct diseases, viz., Perinephritis, Nephritis, Pyelo, Nephritis and Pyelitis. Perinephritis is inflammation of the external covering of the kidney. Nephritis strictly so called, is inflammation of the tubular portion of the kidneys. Pyelo Nephritis is inflammation of the mucous membrane of the pelvis of the kidney and of its tubular structure. Pyelitis is inflammation of the mucous membrane of the pelvis of the kidney alone. As a result of the acute inflammation, there may be softening of the structure of the kidneys. As a result of the chronic, there may be tubercular degeneration of the kidney, called Brights' disease.

ANUNTA CHUNDROBA.

APPENDIX (M).

Students of 1846-47.

Tabular Statement exhibiting the classification of the 3rd year Students in accordance with the results of the examination held from 22nd March to 5th April 1849; the lowest number marks the first in merit.

		† Anatomy.	‡ Materia Medica.	* Institutes of Medicine.	§ Surgery.	‖ Medicine.	Total.	Remarks.
1	Anunta Chundroba	4	1	4	1	1	11	* The examination only in the Physiological Division of the course. The general result is good.
2	Sebastian A. D. Carvalho.	3	2	3	2	4	14	
3	Bhawoo Dajee	1	6	1	2	6	16	
4	J. C. Lisboa.....	2	7	5	3	3	20	† General result in Anatomy good.
5	Paul Frances Gomez	6	8	2	5	5	26	‡ General result in Materia Medica pretty good.
6	Merwanjee Sorabjee.....	5	3	6	4	10	28	
7	Atmaram Pandurung	7	9	8	6	2	32	§ Surgery and Medicine fair for first year Students in these branches.
8	Muncherjee Sorabjee.....	8	4	7	6	7	32	
9	Burjorjee Dorabjee.....	13	5	10	8	8	44	
10	Naserwanjee Bomanjee.....	10	10	11	7	9	47	
11	Dosabhoy Bazunjee.	12	12	12	9	12	57	‖ This Student unavoidably absent in Materia Medica, Surgery, and Medicine.
12	Ardaseer Jamseljee	11	11	13	10	13	58	
‖	Furdunjee Jamseljee	9	0	9	0	0	0	

C. Morehead,
Supt. Grant Medical College.

Students who entered in the session 1847-48.

Tabular Statement exhibiting the classification of the 2nd year Students in accordance with the results of the examinations held on the 22nd, 23rd, 24th, 26th, 27th, 28th, 29th, 30th, March and 4th April 1849; the lowest number marks the first in merit.

		* Anatomy.	† Chemistry.	‡ Institutes of Medicine.	§ Materia Medica.	Total.	Remarks.
1	Narayen Dajee.....	1	2	1	1	5	* General result of Anatomy pretty good.
2	Shamrao Narayen	3	1	2	2	8	† Of Chemistry good.
3	Sadashew Hemraj	2	4	4	3	13	‡ Physiology bad.
4	Balcrushna Chintoba	4	3	3	4	14	§ Materia Medica indifferent.

Students who entered in the session 1848-49.

Tabular Statement exhibiting the classifications of the 1st year students in accordanca with the examination held on the 22nd, 23rd, 28th, 29th, 30th March and 5th April.

		* Anatomy.	† Chemistry.	Total.	Remarks.
1	Rustomjee Byramjee.....	1	1	2	* Pretty good.
2	Paluajee Pestonjee.....	2	2	4	† Pretty good.
3	Wittul Anunt.....	3	3	6	
4	Balcrushna Sackaram.....	4	4	8	
5	Hariehund Chundroba.	5	5	10	

APPENDIX (N).

DONATIONS TO THE MUSEUM.

Prepared and presented by Bhawoo and Narayan Dajee.

1st. The upper extremity injected. The veins, arteries, and nerves minutely dissected.

2nd. Mal position of the Right Kidney which is situated in the Pelvis, the right renal artery is given off from the right common Iliac and the left just above the bifurcation. The arteries and veins injected.

3rd. Preparation injected shewing the carotids arising from the arch of the Aorta by a single trunk, the right subclavian arising to the left of the left subclavian and passing behind the Trachea and Œsophagus to the right side.

4th. Injected preparation shewing the relations of the Portal Vein, the Hepatic Artery and Hepatic Duct at their entrance into the Liver.

5th. The skull of a Mongoose.

6th. A Specimen of Madrepore from the Maldive Islands.

Prepared and presented by Burjorjee Dorabjee & Dosabhoy Bazunjee.

1. Injected preparation of the heart Aorta and its branches given off from the Arch shewing their relations to the Lungs and Trachea.

2. Injected preparation of the division of the common Iliac Artery of the right side, shewing the relations of the external Iliac to Pouparts ligament, and the origin from it of the Obturator Artery, also the relations of some of the branches of the Internal Iliac.

Prepared and presented by Atmaram Pandurung.

1. Dried preparation shewing the minute distribution of the nerves of the head and neck.

2. Skeleton of a Female Jackall.

Prepared and presented by Merwanjee Sorabjee.

1. The leg injected; the arteries and nerves minutely dissected.

Presented by J. J. Hospital.

1st. An upper lobe of one of the lungs in which tubercles are abundantly disseminated, and a tubercular excavation, the size of a walnut at the apex (the most depending part of the preparation.)

2nd. The mucous membrane of part of the large intestines, the subject of ulceration, which has nearly perforated all the coats in one place.

3rd. The mucous coat of part of the large intestines in a state of hypertrophy.

4th. Gangrenous excavation of upper lobe of left lung with grey induration of the rest.

5th. A specimen of Cirrhosis of the Liver.

6th. A specimen of Bright's disease.

7th. A fibro cartilaginous tumour removed by Mr. Peet from the Epigastric region of an old Mussulman.

8th. Specimen of Bright's disease of the Kidney.

9th. Aneurism of the Aorta injected and dried with the heart and lungs, and their relations to the vertebral column.

10th. Hypertrophied Scrotum removed from a Dhobee by J. Peet, Esq.

11th. Aneurism of the carotid artery of the left side.

12th. Urinary calculus removed by J. Peet, Esq. from an old Parsee.

13th. Upper part of the skull, of a Seedi, exhibiting a perforated fracture inflicted by a Constable with the handle of a hunting whip.

14th. Fractured skull of an old man thrown down by a buggy.

15th. A urinary calculus, removed by Mr. Peet.

16th. A gravid uterus about the 4th month, opened on one side shewing the fœtus and the attachment of the Placenta.

Presented by L. R. Rivett, Esquire.

1. Specimen of the Draco volans.

Presented by J. Reynolds, Esquire.

The inner surface of the Rectum in a granular state from old disease.

Presented by J. Deas, Esquire.

Two Fœtuses adherent by the chest. Heads and bodies double apparently at the full period of gestation.

Presented by H. J. Carter, Esquire.

The head of a woman called Oomee found buried in a house at Girgaum, having been murdered by a blow extensively fracturing the skull.

Presented by A. H. Leith, Esquire.

The face and neck of an anencephalus fœtus.

Presented by Captain Inglefield.

A stuffed sword fish.

Presented by H. Magrath, Esquire.

Aneurism of the Aorta.

Presented by G. Maitland, Esquire.

Aneurism of the Aorta with thick concentric layers of coagula.

APPENDIX (O).

STATEMENT OF THE ACCOUNTS

OF THE

ANDERSON, FARISH, AND CARNAC

SCHOLARSHIP FUNDS.

Dr.——*ANDERSON Scholarship in Account Current*

1848			Rs.	A.	P.		Rs.	A.	P.
May	2	To Cash paid to C. Morehead Esq. Superintendent Grant Medical College, being the amount of Atmaram Pandurung's pay for last month	20	0	0	364	1	5	1
June	„	„ Ditto ditto ditto ditto....	20	0	0	334	1	1	6
„	25	„ Ditto ditto Sudashew Hemraj's. pay from 16th April, to 31st May last	15	0	0	312	0	12	6
„	„	„ Ditto do. J. C. Lisbon's pay from ditto to ditto	22	8	0	312	1	2	5
July	4	„ Ditto ditto on account of the Scholarship	15	0	0	301	2	3	7
Aug.	1	„ Ditto ditto ditto	15	0	0	273	2	0	3
„	8	„ Ditto to H. Carter, Esq. Offg. Secretary Board of Education, on account of the scholarship as per Government order dated 13th ultimo	150	1	1	266	6	8	11
Sep.	2	„ Ditto to C. Morehead, Esq. Supt. Grant Medical College on account of the Scholarship	15	0	0	241	1	12	6
Oct.	2	„ Ditto ditto ditto	45	0	0	211	1	5	11
Nov.	1	„ Ditto ditto ditto	15	0	0	181	1	5	5
Dec.	2	„ Ditto ditto ditto	45	0	0	150	1	1	9
1849									
Jan.	2	„ Ditto ditto ditto	15	0	0	119	0	11	0
Feb.	1	„ Ditto ditto ditto	45	0	0	89	0	10	6
March	2	„ Ditto ditto ditto	45	0	0	60	0	7	1
April	2	„ Ditto ditto ditto	45	0	0	29	0	3	5
			677	9	1		22	15	10
	30	„ Balance	13,001	4	10	1. B.	752	9	5
		Rupees....	13,678	13	11		775	9	3

Bombay Castle,

Accountant General's Office,

29th September 1849.

with the Honorable Company ——————— *Cr.*

			Rs.	A.	P.		Rs.	A.	P.
1848 May	1	By Balance	12,926	4	6	365	775		3
1849 April	30	„ Interest Balance @ 6 per Cent per annum	752	9	5				
		Rupees....	13,678	13	11		775	9	3

Errors Excepted,

(Signed.) E. E. ELLIOT.

Accountant General.

Dr. ——— *FARISH Scholarship in Account Current*

1848			Rs.	A.	P.		Rs.	A.	P.
June	23	To Cash paid to C. Morehead. Esq. being the amount of Annuta Chundraba's pay from 16th April to 31st May last.....	22	8	0	312	1	2	5
„	„	„ Ditto ditto of Narayan Dajee's pay from ditto to ditto	22	8	0	312	1	2	5
July	4	„ Ditto ditto on account of the Scholarship	30	0	0	301	1	7	8
Aug.	1	„ Ditto ditto on account of ditto ..	30	0	0	275	1	5	6
„	8	„ Ditto to H. Carter, Esq. Officiating Secretary Board of Education on account of the Scholarship as per Government order dated 13th ultimo	150	1	1	266	6	8	11
Sept.	2	„ Ditto to C. Morehead Esq. Supt. Grant Medical College on account of the Scholarship	30	0	0	241	1	3	0
Oct.	2	„ Ditto on account of ditto	30	0	0	211	1	0	7
Nov.	1	„ Ditto ditto ditto	30	0	0	181	0	14	3
Dec.	2	„ Ditto ditto ditto	30	0	0	150	0	11	10
1849									
Jan.	2	„ Ditto ditto ditto	30	0	0	119	0	9	4
Feb.	1	„ Ditto ditto ditto	30	0	0	89	0	7	0
March	2	„ Ditto ditto ditto	30	0	0	60	0	4	9
April	2	„ Ditto ditto ditto	30	0	0	29	0	2	5
			495	1	1		16	15	11
„	30	„ Balance	11,889	11	1	I. B.	684	15	10
		Rupees....	12,384	12	2		701	15	9

Bombay Castle,

ACCOUNTANT GENERAL'S OFFICE,

29th September 1849.

with the Honorable Company. ——————— *Cr.*

			Rs.	A.	P.		Rs.	A.	P.
1848 May 1849 April	1	By Balance.....	11,699	12	4	365	701	15	9
	30	„ Interest Balance @ 6 per Cent per annum	684	15	10				
		Rupees....	12,384	12	2		701	15	9

Errors Excepted,

(Signed.) E. E. ELLIOT,

Accountant General.

Dr. ——— *CARNAC Scholarship in Account Current*

1848			Rs.	A.	P.		Rs.	A.	P.
May	2	To Cash paid to C. Morehead, Esq. Superintendent Grant Medical College being amount of S. A. D. Carvalho's pay for last month	30	0	0	364	1	12	10
June	1	„ Ditto ditto ditto	30	0	0	334	1	10	4
„	23	„ Ditto ditto being the amount of Merwanjee Sorabjee's pay from 16th April to 31st May last	30	0	0	312	1	8	7
July	4	„ Ditto ditto on account of Scholarship	50	0	0	301	2	7	6
Aug.	1	„ Ditto ditto ditto	50	0	0	273	2	3	10
„	8	„ Ditto H. Carter, Esq. Officiating Secretary Board of Education on account of the Scholarship as per Government order dated 13th ultimo	150	1	1	266	6	8	11
Sept.	2	„ Ditto to C. Morehead, Esq. on account of Scholarship	50	0	0	241	1	15	9
Oct.	2	„ Ditto ditto ditto	50	0	0	211	1	11	8
Nov.	1	„ Ditto ditto ditto	50	0	0	181	1	7	9
Dec.	2	„ Ditto ditto ditto	50	0	0	150	1	3	8
1849									
Jan.	2	„ Ditto ditto ditto	50	0	0	119	0	15	7
Feb.	1	„ Ditto ditto ditto	50	0	0	89	0	11	8
March	2	„ Ditto ditto ditto	50	0	0	60	0	7	11
April	2	„ Ditto ditto ditto	50	0	0	29	0	3	9
			740	1	1		25	1	9
„	30	„ Balance	11,476	7	1	I. B.	667	12	11
		Rupees	12,216	8	2		692	14	8

Bombay Castle,

ACCOUNTANT GENERAL'S OFFICE,

29th September 1849.

Errors Excepted.

(Signed.) E. E. ELLIOT,

Accountant General

with the Honorable Company ——————— *Cr.*

			Rs.	A.	P.		Rs.	A.	P.
1848 May	1	By Balance.....	11,549	11	3		692	14	8
1849 April	30	„ Interest Balance @ 6 per Cent per annum	667	12	11				
		Rupees....	12,216	8	2		692	14	8

(TRUE COPIES)

(Signed) HENRY J. CARTER,

Officiating Secretary.

133215

h financial assistan
rnment of Maharas
ch Government for Maharas